

TEST REPORT

Nr. R24057201

Federal Communication Commission (FCC)

Report Reference No.	R24057201
Date of issue:	28.06.2024
Total number pages:	42
Customer name	Elca S.r.l.
Address	Via del Commercio, 7/B – 36065 Mussolente (VI) – Italy
Test specification:	
Standard(s)	FCC Rules & Regulations, Title 47:2023 Part 15 paragraph(s): 203, 204, 205, 207, 209, 215 and 249 Tests details at page 7
Non-standard test method	N/A
Test Report Form No.	15-249DEKRA
Test Report Form(s) Originator ...	DEKRA Testing and Certification S.r.l.
Master TRF	2024-06
General disclaimer:	
The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of DEKRA Testing and Certification S.r.l.	
(*) Test item description	Transmitting unit AT MITO-MINI+ 915 – Variant 2: AA Battery and Without Stop Mushroom portable component (remote station) through which the user interfaces with the Radio Remote Control
(*) Trademark	Elca
(*) Manufacturer	Elca S.r.l.
(*) Model / Type reference	AT MITO-MINI+ 915
(*) FCC ID	2ABS7-ATMILS915
(*) Rating(s)	3,7 Vdc from battery
Report	
Tested by (name + signature)	C. Panozzo
Approved by (name + signature)	F. Marenda

(*) information provided by the customer

1 Summary

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2 Reference standard(s)	
FCC Rules and Regulation Title 47 part 15:2023	--
ANSI C63.4:2014	American National Standard for Methods of Measuring of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz – 40 GHz
ANSI C63.10:2020 + COR1:2023	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
3 List of attachments	
Attachment 1: Measurement uncertainty, judgement of compliance and quality manual references	
4 Deviation(s) from test specification	
None	
5 Testing location	
DEKRA Testing and Certification S.r.l. Via della Fisica, 20 – 36016 Thiene (VI) – Italy Test site facility's FCC registration number: 182474	

Revision index	Date	Change history
1.0	28.06.2024	--

Testing and sampling:	
Date of receipt of test item	27.03.2024
Testing start date	10.05.2024
Testing end date	18.06.2024
Sampling procedure	Sample used for testing chosen by the customer; DEKRA Testing and Certification S.r.l. cannot be considered responsible for the selection of the sample
Internal identification	Adhesive label with the product number P240316
General remarks:	
This report shall not be reproduced, except in full, without the written approval of DEKRA Testing and Certification S.r.l. The test results presented in this report relate only to the object tested. “(see appended table)”: refers to a table appended to the report. Throughout this report a comma is used as the decimal separator. Tests reported in this test report marked by wording: “Test not accredited by ACCREDIA” are not part of the ACCREDIA accreditation of this laboratory.	
Possible test case verdicts:	
Test case does not apply to the test object:	N/A (Not Applicable)
Test object meets the requirement:	P (Pass)
Test object does not meet the requirement:	F (Fail)
Test object was not evaluated for the requirement:	N/E (Not Executed)
Definition of symbols used in this test report:	
☒ Indicates that the listed condition, standard or equipment is applicable for this report. ☐ Indicates that the listed condition, standard or equipment is not applicable for this report.	

6 General description of tested item and testing condition(s)

Description	Transmitting unit AT MITO-MINI+ 915 – Variant 2: AA Battery and Without Stop Mushroom portable component (remote station) through which the user interfaces with the Radio Remote Control						
Model Number	AT MITO-MINI+ 915						
FCC ID	2ABS7-ATMILS915						
Serial Number	--						
Brand name	Elca						
Frequency band	902 – 928 MHz						
Nominal frequency	FL: 920,25 MHz		FM: 920,60 MHz		FH: 921,15 MHz		
Test power supply		Voltage and Frequency	Reference poles				
			N	L1	L2	L3	PE
	☐	AC:	☐	☐	☐	☐	☐
	☐	AC:	☐	☐	☐	☐	☐
	☒	DC: 3,7 V from battery					☐
Firmware version	Swe01-11						
Type of equipment	☒ Transmitter unit ☒ Receiver unit						
Type of station	☒ Portable station ☐ Mobile station						
Test arrangements of EUT	<i>Intended operational arrangement(s) of EUT</i>		<i>Test arrangement (see basic standard)</i>				
	☐ Table-top only		Table-top				
	☐ Floor-standing only		Floor-standing				
	☐ Can be floor-standing or table-top		Table-top				
	☐ Rack mounted		In rack or table-top				
	☒ Other, for example wall mounted, ceiling mounted, handheld, body worn		Table-top				
Operating modes	No.	Operating mode of test item					
	1	EUT in continuous transmission at maximum power					
Declination of responsibility	Information relating to the description of the sample, components list, and software/hardware version (if reported) are provided by the customer. DEKRA Testing and Certification S.r.l. cannot be considered responsible for this information, for any other document sent by the customer and for any difference between the software version present in the tested sample and that present in the object intended for final sale. In some cases, the software in the tested sample is in a version dedicated exclusively to the test, and therefore does not represent the software installed in the final version of the product.						

6.1 Photos of the test item



7 Verdict summary section

FCC Rules & Regulations, Title 47:2023 Part 15 paragraph(s): 203, 204, 205, 207, 209, 215 and 249			
Clause	Requirement – Test case	Basic standard	Verdict
Part 15.203	Antenna requirements	ANSI C63.10	N/E
Part 15.207	Conducted emissions	ANSI C63.10	N/A (+)
Part 15.209	Radiated emissions and spurious emission	ANSI C63.10	P
Part 15.209 and 15.249	Peak Output Power	ANSI C63.10	P
Part 15.215	20 dB Bandwidth	ANSI C63.10	N/E
Part 15.249	Band edge	ANSI C63.10	N/E

(+) Devices which only employ battery power

8 Test conditions

8.1 General

Environmental reference conditions..... :	The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. The climatic conditions during the tests were within the following limits:																			
	Temperature		Humidity		Atmospheric pressure															
	15 °C – 35 °C		30 % - 60 %		800 hPa – 1060 hPa															
	If explicitly required in the basic standard or applied product standard the climatic values are recorded and documented separately in this test report. Environmental conditions have been monitored with the following instrument.																			
	<table><tr><td><i>Id. Number</i></td><td><i>Manufacturer</i></td><td><i>Model</i></td><td><i>Serial number</i></td><td><i>Description</i></td><td><i>Last calibration date</i></td><td><i>Calibration expiration</i></td></tr><tr><td>CMC S302</td><td>Testo</td><td>175H1</td><td>40370182610</td><td>Data Logger</td><td>May 2024</td><td>May 2025</td></tr></table>							<i>Id. Number</i>	<i>Manufacturer</i>	<i>Model</i>	<i>Serial number</i>	<i>Description</i>	<i>Last calibration date</i>	<i>Calibration expiration</i>	CMC S302	Testo	175H1	40370182610	Data Logger	May 2024
<i>Id. Number</i>	<i>Manufacturer</i>	<i>Model</i>	<i>Serial number</i>	<i>Description</i>	<i>Last calibration date</i>	<i>Calibration expiration</i>														
CMC S302	Testo	175H1	40370182610	Data Logger	May 2024	May 2025														
Measurement uncertainties :	Attachment 1																			

9 Test results

9.1 Radiated emissions and spurious emission

Tested by	C. Panozzo	
Test date	14.06.2024	
Test location (stand)	Semi-anechoic chamber (CMC A070)	
Basic standard(s)	ANSI C63.10 cl. 6.3, 6.4, 6.5 and 6.6	
Product standard(s)	FCC Rules and Regulation; Titles 47 Part. 15.209 and 15.249 (a) and (d)	
Test set-up description.....	☒	Table top equipment set-up (80 cm above the reference ground plane)
	☐	Floor standing equipment set-up (insulating material up to 12 mm thick)
	☐	False floor installation equipment set-up (insulating material up to 34 cm above the reference ground plane)
Supplementary test set-up description.....	--	
Test method applied	SAC with measurement distance [m]: 10 m at frequencies ≤ 1 GHz 3 m at frequencies > 1 GHz	
Supplementary information	--	

Acceptance limits

Acceptance limits for emissions in restricted frequency bands ($f < 1000$ MHz)		
Frequency range (MHz)	Test distance (m)	Limits [dB(μ V/m)]
0,009 to 0,490	300	$20\log(2400/F(\text{kHz}))$
0,490 to 1,705	30	$20\log(24000/F(\text{kHz}))$
1,705 to 30	30	$20\log(30)$
30 to 88	3	$20\log(100)^{**}$
88 to 216	3	$20\log(150)^{**}$
216 to 960	3	$20\log(200)^{**}$
Above 960	3	$20\log(500)$

** : except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54 – 72 MHz, 76 – 88 MHz, 174 – 216 MHz or 470 – 806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.

Perimeter protection systems may operate in the 54 – 72 MHz and 76 – 88 MHz bands under the provisions of this section. The use of such perimeter protection systems is limited to industrial, business and commercial applications.

Remarks: the emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9 – 90 kHz and 110 – 490 kHz. Radiated emission limits in these two bands are based on measurements employing an average detector. The results have been extrapolated to the specified distance using an extrapolation factor.

Acceptance limits for emissions in restricted frequency bands ($f \geq 1000$ MHz)			
Frequency (MHz)	Test distance (m)	AV limits [dB(μ V/m)]	Peak limits [dB(μ V/m)]
> 1000	3	54	74

The restricted frequency bands are listed in the following table:

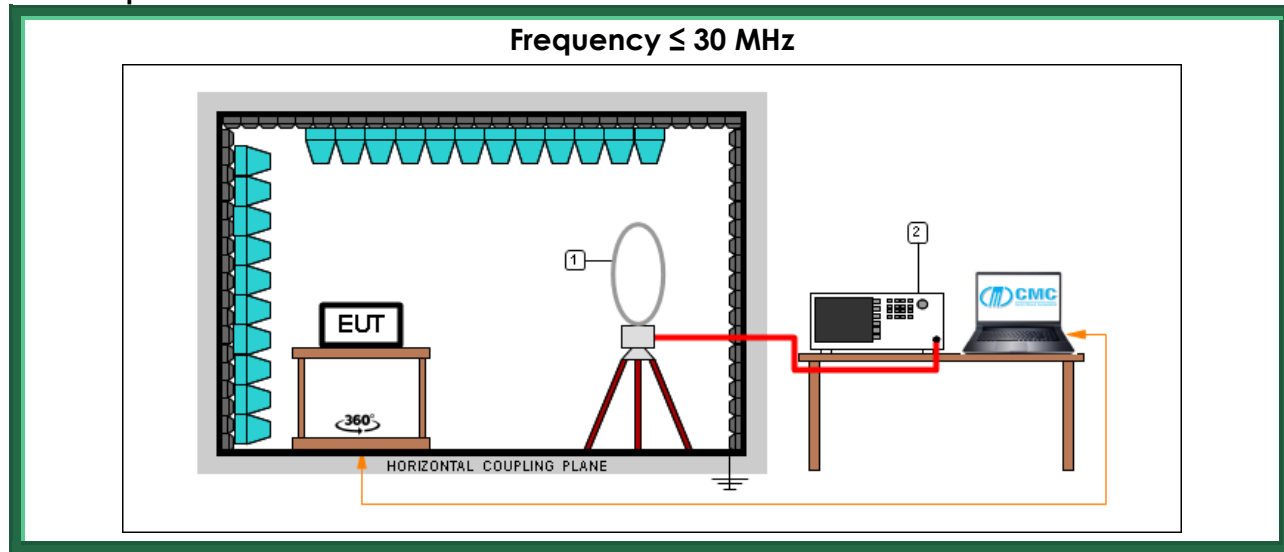
MHz	MHz	MHz	GHz
0,090 – 0,110	16,42 – 16,423	399,9 – 410	4,5 – 5,15
0,495 – 0,505	16,69475 – 16,69525	608 – 614	5,35 – 5,46
2,1735 – 2,1905	16,80425 – 16,80475	960 – 1240	7,25 – 7,75
4,125 – 4,128	25,5 – 25,67	1300 – 1427	8,025 – 8,5
4,17725 – 4,17775	37,5 – 38,25	1435 – 1626,5	9,0 – 9,2
4,20725 – 4,20775	73 – 74,6	1645,5 – 1646,5	9,3 – 9,5
6,215 – 6,218	74,8 – 75,2	1660 – 1710	10,6 – 12,7
6,26775 – 6,26825	108 – 121,94	1718,8 – 1722,2	13,25 – 13,4
6,31175 – 6,31225	123 – 138	2200 – 2300	14,47 – 14,5
8,291 – 8,294	149,9 – 150,05	2310 – 2390	15,35 – 16,2
8,362 – 8,366	156,52475 – 156,52525	2483,5 – 2500	17,7 – 21,4
8,37625 – 8,38675	156,7 – 156,9	2690 – 2900	22,01 – 23,12
8,41425 – 8,41475	162,0125 – 167,17	3260 – 3267	23,6 – 24,0
12,29 – 12,293	167,72 – 173,2	3332 – 3339	31,2 – 31,8
12,51975 – 12,52025	240 – 285	3345,8 – 3358	36,43 – 36,5
12,57675 – 12,57725	322 – 335,4	3600 – 4400	Above 38,6
13,36 – 13,41			

Acceptance limits for emissions in non-restricted frequency bands

Field strength of harmonics: 500 $\mu\text{V/m}$ (54 dB($\mu\text{V/m}$)).

Emissions radiated outside of the specified frequency bands, except for harmonic (b)emissions, shall be attenuated by at least 50 dB below the level of the fundamental emissions or to the general field strength limits listed in RSS-Gen, whichever is less stringent

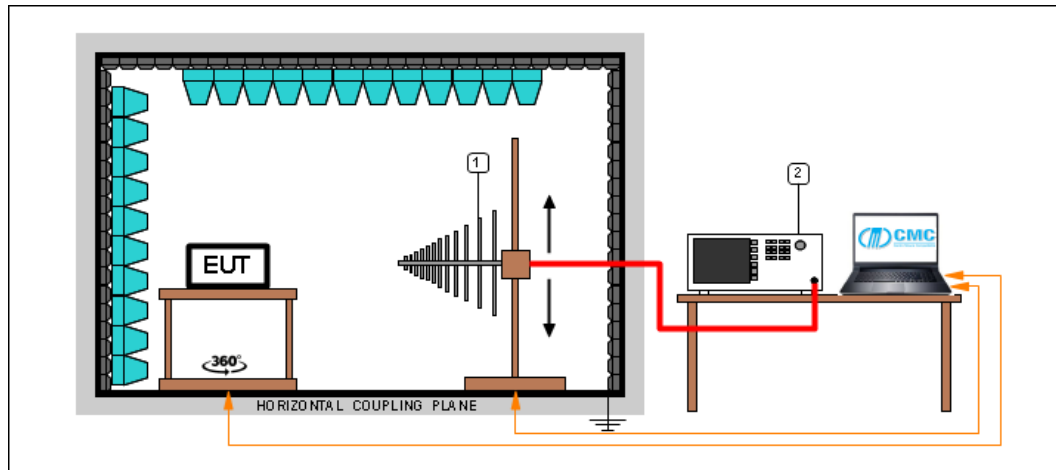
Test setup



Test setup PE004_01

Nr.	<i><i>Id. Number</i></i>	<i><i>Manufacturer</i></i>	<i><i>Model</i></i>	<i><i>Serial number</i></i>	<i><i>Description</i></i>	<i><i>Last calibration date</i></i>	<i><i>Calibration expiration</i></i>
2	CMC S353	Rohde & Schwarz	ESW26	101492	Emi Test Receiver	December 2023	December 2024
1	CMC S127	Schaffner	HLA6120	1191	Loop Antenna 9kHz - 30MHz	May 2023	May 2024
--	CMC A105	Frankonia	FC06	FC06.1-2017-073	Turntable & Antenna mast controller (Software V02.05.013)	No calibration required	No calibration required

Frequency ≤ 1 GHz



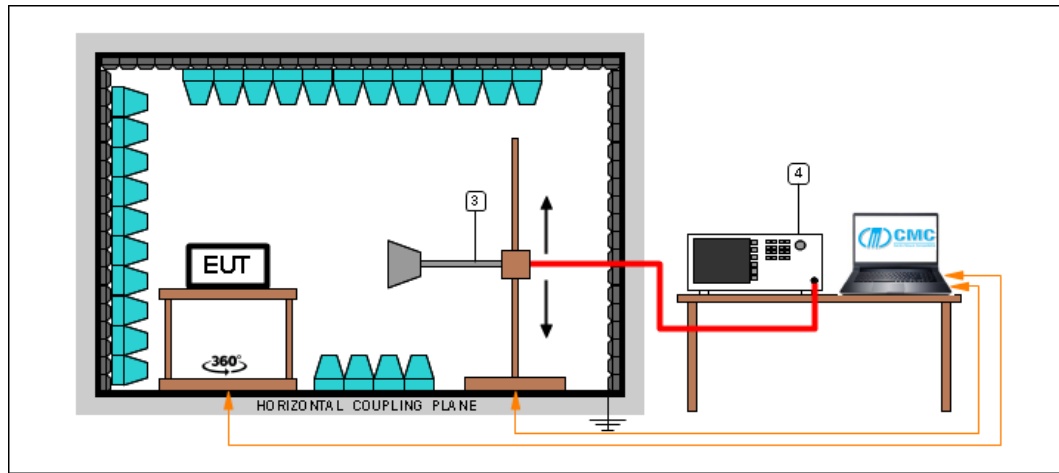
Test setup PE004_02

Nr.	Id. Number	Manufacturer	Model	Serial number	Description	Last calibration date	Calibration expiration
2	CMC S353	Rohde & Schwarz	ESW26	101492	Emi Test Receiver	December 2023	December 2024
1	CMC S271	Schwarzbeck	BBA 9106 + VHBB 9124	831	Broadband Antenna	August 2022	August 2025
--	CMC A105	Frankonia	FC06	FC06.1-2017-073	Turntable & Antenna mast controller (Software V02.05.013)	No calibration required	No calibration required

Test setup PE004_03

Nr.	Id. Number	Manufacturer	Model	Serial number	Description	Last calibration date	Calibration expiration
2	CMC S353	Rohde & Schwarz	ESW26	101492	Emi Test Receiver	December 2023	December 2024
1	CMC S287	Schwarzbeck	VUSLP 9111B	9111B-203	Broadband Antenna	August 2022	August 2025
--	CMC A105	Frankonia	FC06	FC06.1-2017-073	Turntable & Antenna mast controller (Software V02.05.013)	No calibration required	No calibration required

Frequency > 1 GHz



Test setup PE004_04

Nr.	Id. Number	Manufacturer	Model	Serial number	Description	Last calibration date	Calibration expiration
4	CMC S353	Rohde & Schwarz	ESW26	101492	Emi Test Receiver	December 2023	December 2024
3	CMC S108	Emco	3115	9811-5622	Waveguide antenna	August 2022	August 2025
--	CMC A105	Frankonia	FC06	FC06.1-2017-073	Turntable & Antenna mast controller (Software V02.05.013)	No calibration required	No calibration required

Test setup PE004_05

Nr.	Id. Number	Manufacturer	Model	Serial number	Description	Last calibration date	Calibration expiration
4	CMC S353	Rohde & Schwarz	ESW26	101492	Emi Test Receiver	December 2023	December 2024
3	CMC S290	Schwarzbeck	BBHA 9170	733	Horn Antenna	October 2021	October 2026
--	CMC A105	Frankonia	FC06	FC06.1-2017-073	Turntable & Antenna mast controller (Software V02.05.013)	No calibration required	No calibration required

Result

Transmission channel (MHz)	Antenna polarization	Frequency Range (MHz)	Graphs	Result
920,25	H	30 – 300	G24057210	P
920,25	V	30 – 300	G24057211	P
920,60	V	30 – 300	G24057212	P
920,60	H	30 – 300	G24057213	P
921,15	H	30 – 300	G24057214	P
921,15	V	30 – 300	G24057215	P
921,15	Loop	0,009 – 30	G24057216	P
920,60	Loop	0,009 – 30	G24057217	P
920,25	Loop	0,009 – 30	G24057218	P
920,60	H	300 – 1000	G24057220	P
920,60	V	300 – 1000	G24057221	P
920,25	V	300 – 1000	G24057222	P
920,25	H	300 – 1000	G24057223	P
921,15	H	300 – 1000	G24057226	P
921,15	V	300 – 1000	G24057227	P
920,60	H	1000 – 10000	G24057228	P
920,60	V	1000 – 10000	G24057229	P
920,25	V	1000 – 10000	G24057230	P
920,25	H	1000 – 10000	G24057231	P
921,15	H	1000 – 10000	G24057232	P
921,15	V	1000 – 10000	G24057233	P

Remarks: EUT was tested in 3 orthogonal planes, graphs are related to the highest detected levels.

Measurements at frequencies lower than 30 MHz have been performed with an EUT – antenna distance of 10 m. Measured values have been corrected with conversion factor $40\log(\text{test distance}/10)$ based on the measuring distance provided by the standard.

Measurements at frequencies higher than 30 MHz and lower than 1000 MHz have been performed with an EUT – antenna distance of 10 m. Measured values have been corrected with conversion factor $20\log(\text{test distance}/10)$ based on the measuring distance provided by the standard.

Peaks above the limits are caused by the nominal transmitting frequencies

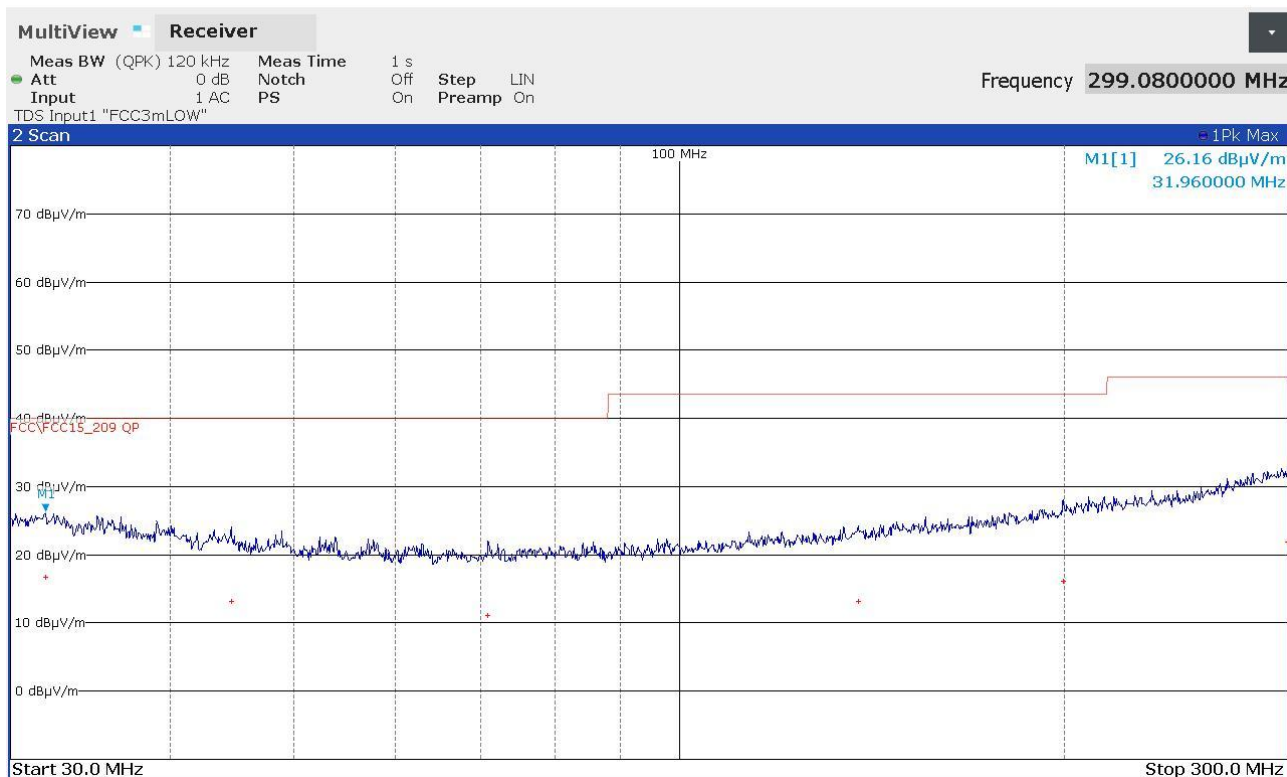
Graphs Legend

PK: Peak; QP [1s] (quasi-peak at 1 second) values are marked with a +

AV: Average; AV [1s] (average at 1 second) values are marked with a X

Graphs

Panozzo 24057210



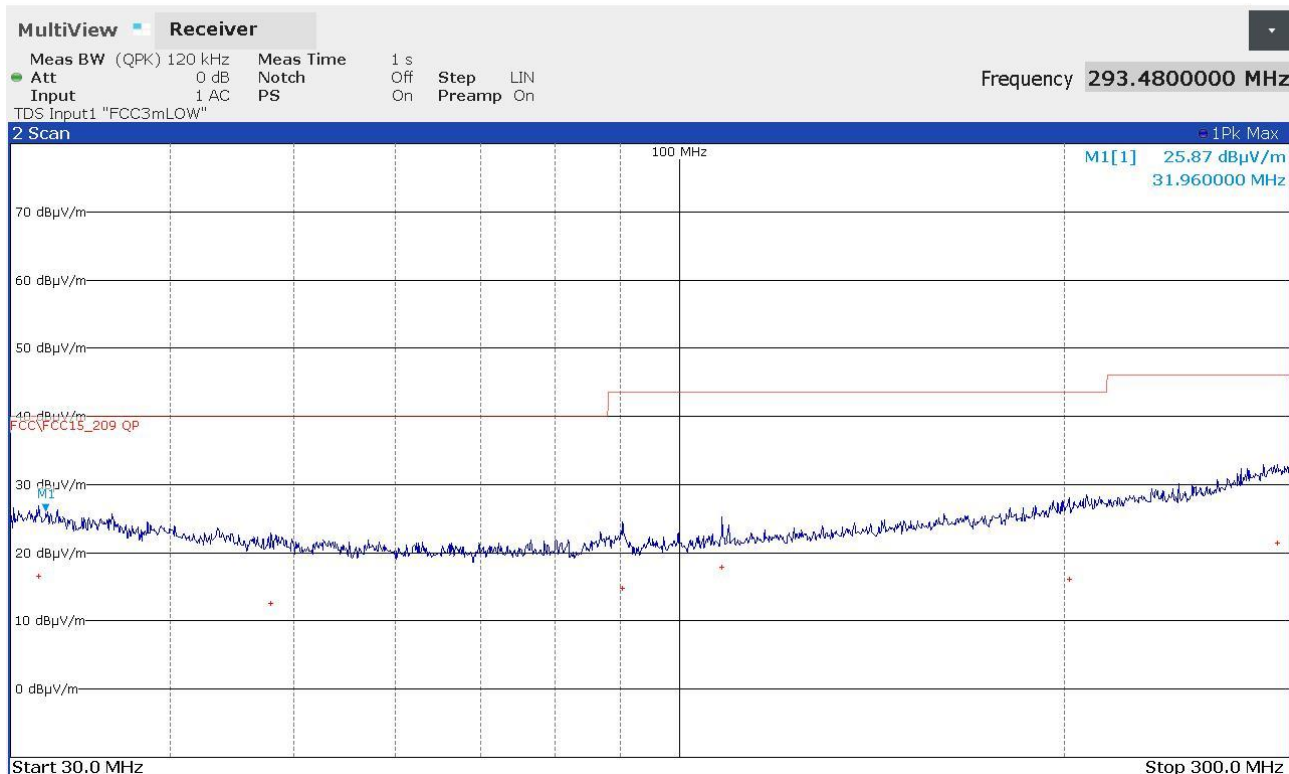
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
31960000	+16,65	-23,35
44640000	+13,21	-26,79
70880000	+11,17	-28,83
138000000	+13,13	-30,39
199520000	+16,06	-27,46
299080000	+21,90	-24,12

24057210_2

Panozzo 24057211



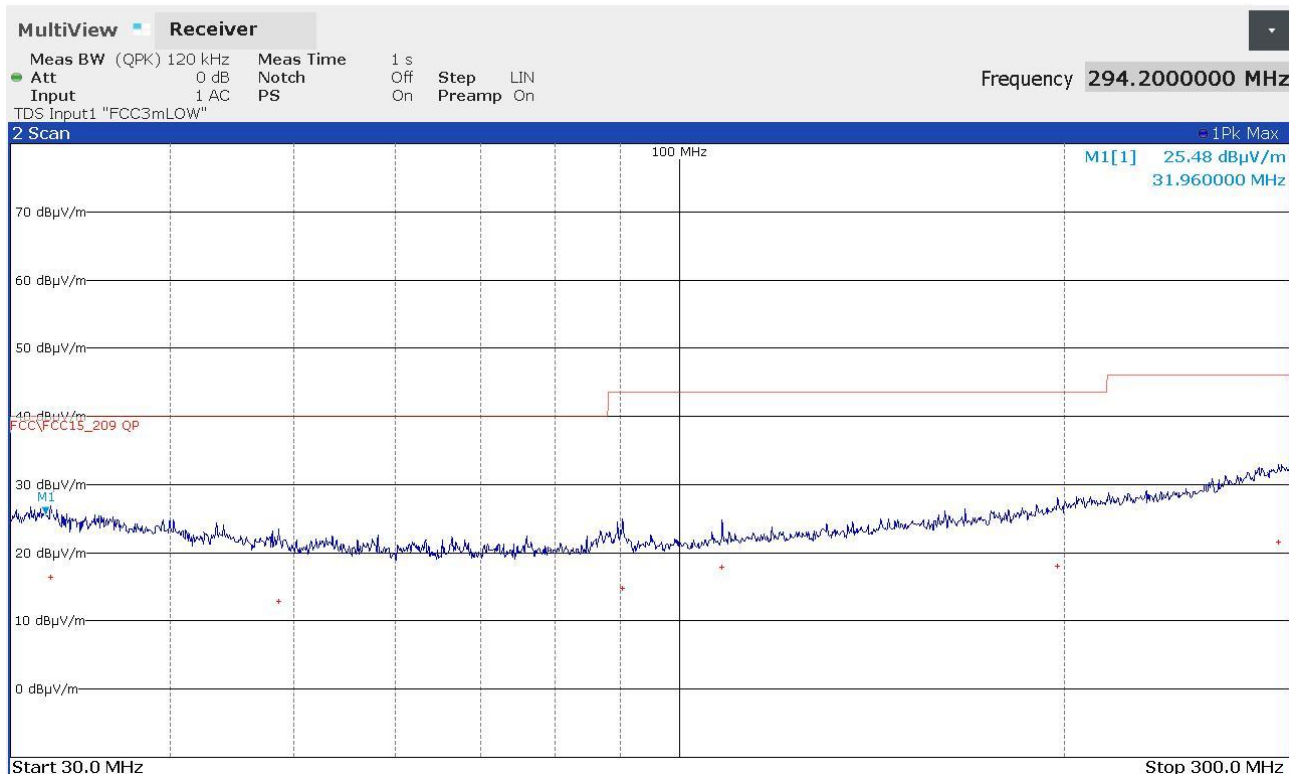
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
31560000	+16,60	-23,40
47920000	+12,51	-27,49
90320000	+14,73	-28,79
107960000	+17,87	-25,65
201800000	+16,11	-27,41
293480000	+21,49	-24,53

24057211_2

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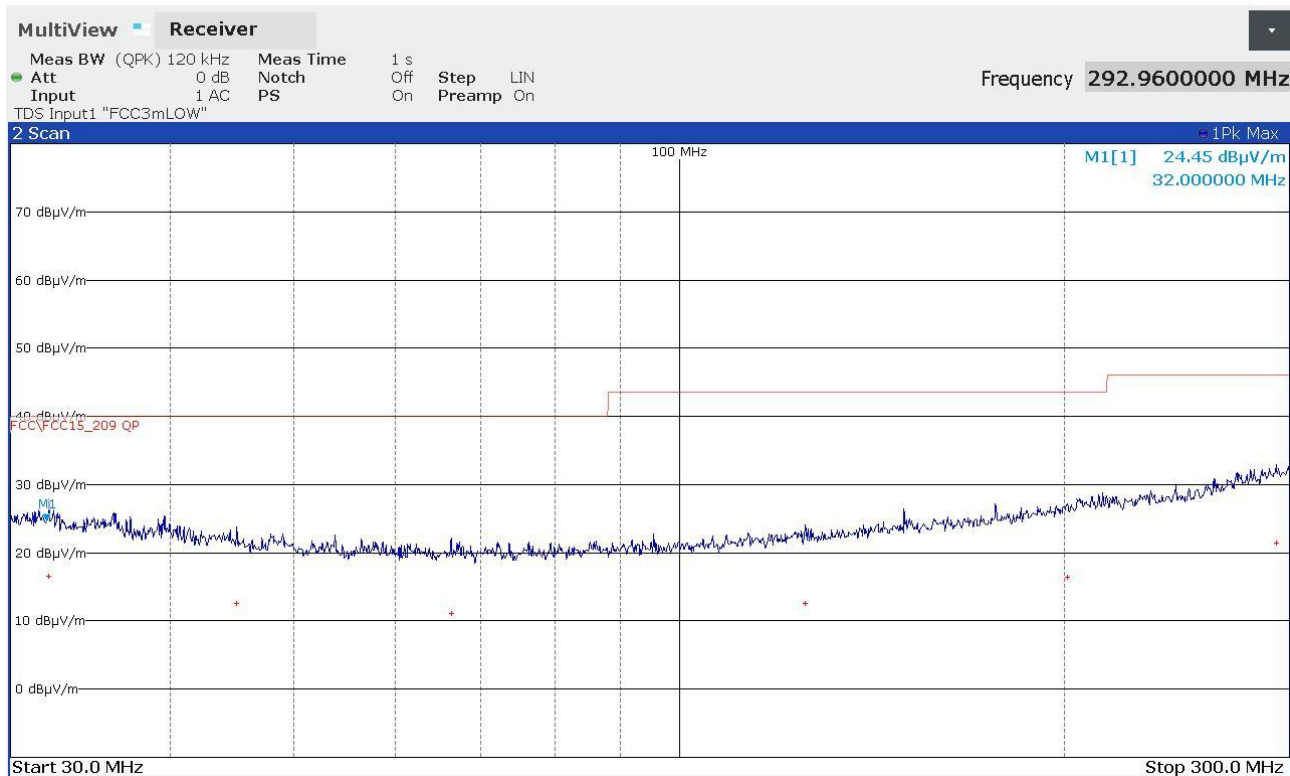
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
32240000	+16,35	-23,65
48640000	+12,87	-27,13
90320000	+14,74	-28,78
108040000	+17,84	-25,68
197600000	+18,08	-25,44
294200000	+21,64	-24,38

24057212_2

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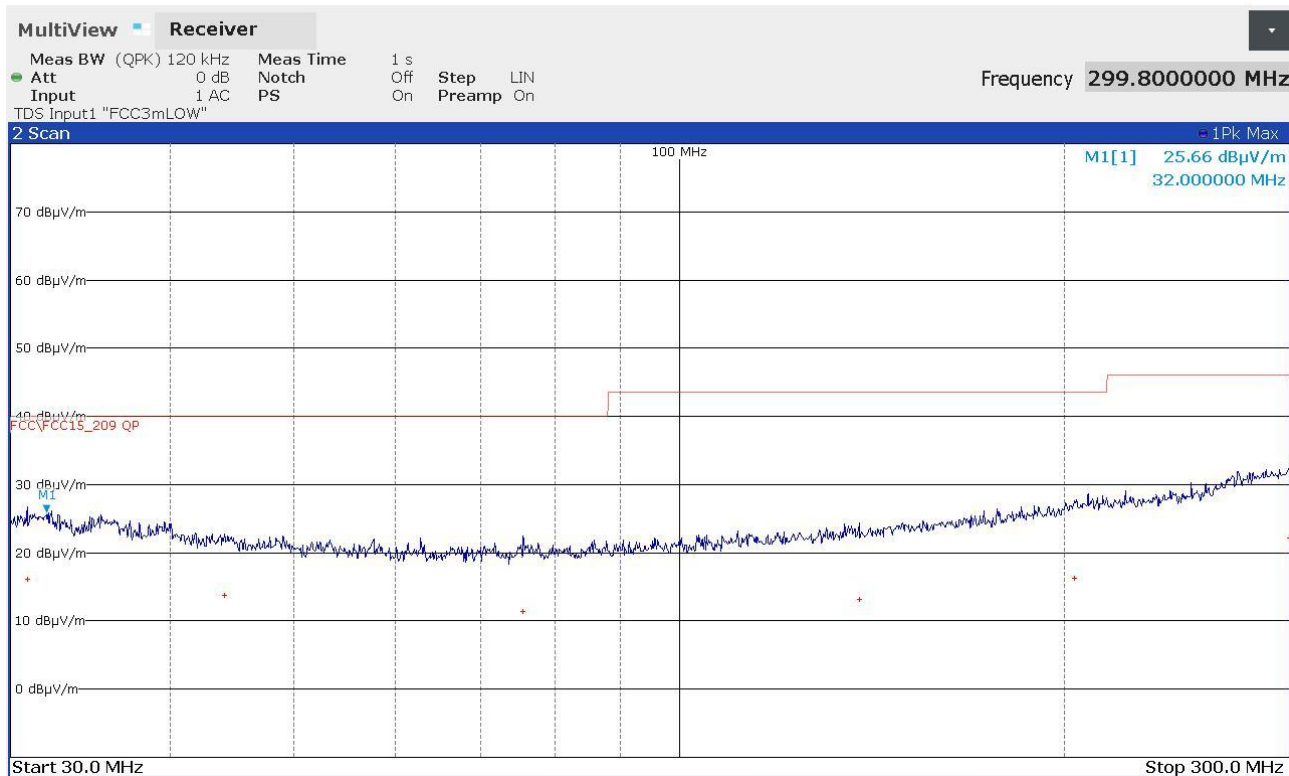
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
32160000	+16,50	-23,50
45080000	+12,59	-27,41
66320000	+11,17	-28,83
125520000	+12,54	-30,98
201200000	+16,39	-27,13
292960000	+21,48	-24,54

24057213_2

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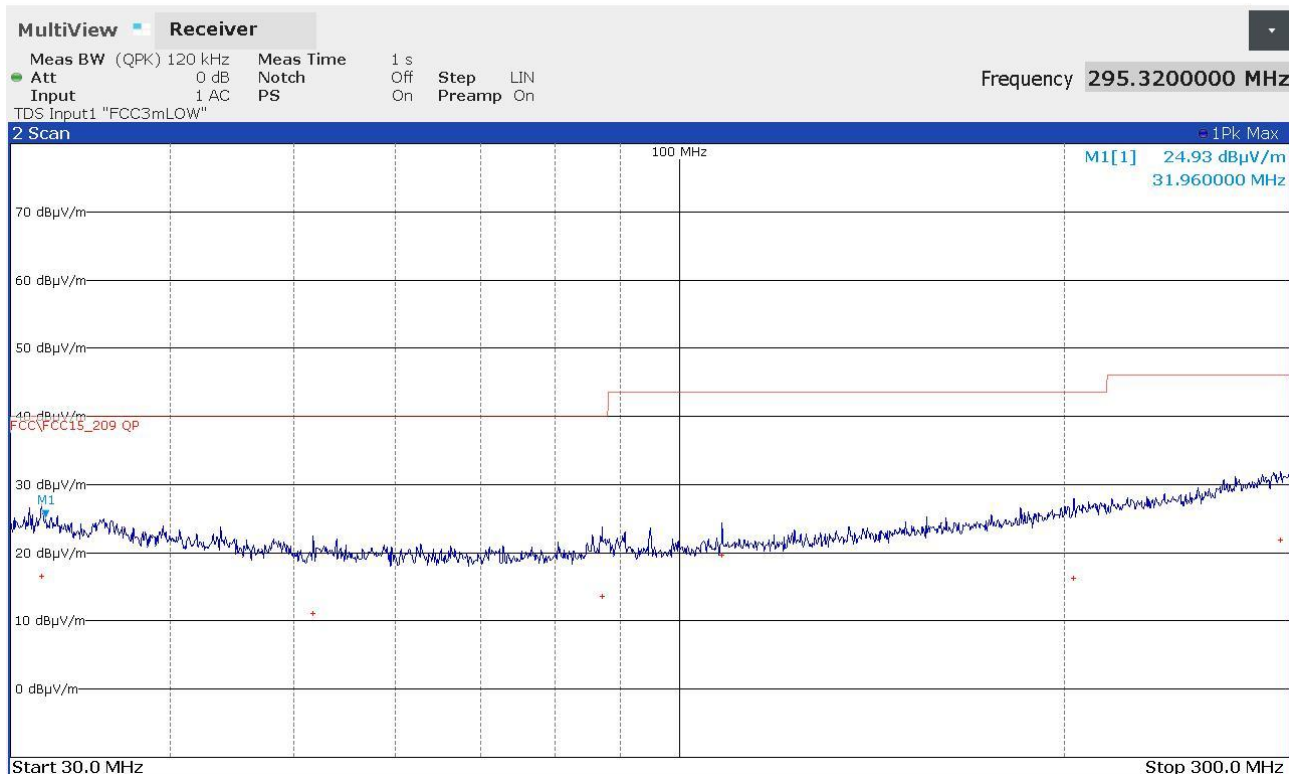
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
30920000	+16,12	-23,88
44120000	+13,75	-26,25
75520000	+11,39	-28,61
138360000	+13,14	-30,38
203840000	+16,26	-27,26
299800000	+22,13	-23,89

24057214_2

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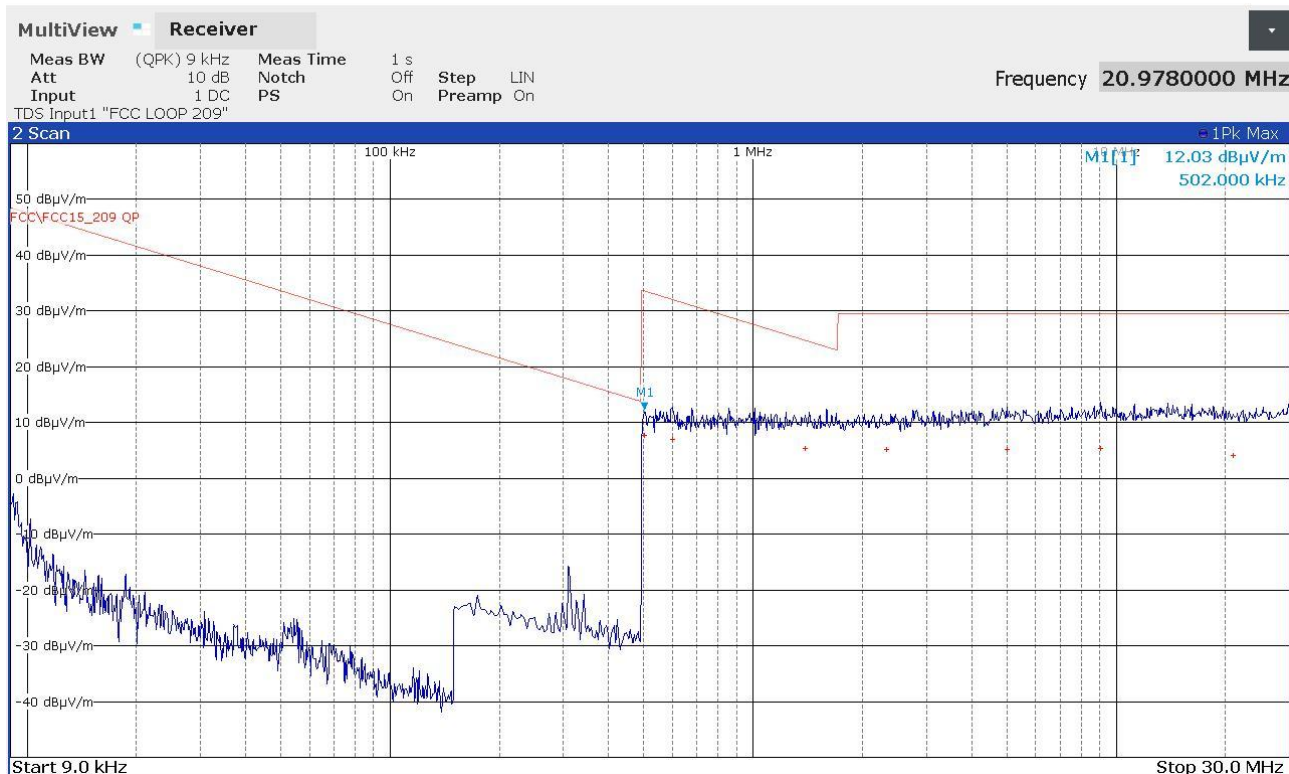
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
31720000	+16,62	-23,38
51720000	+11,04	-28,96
87080000	+13,63	-26,37
108000000	+19,60	-23,92
203520000	+16,23	-27,29
295320000	+21,81	-24,21

24057215_2

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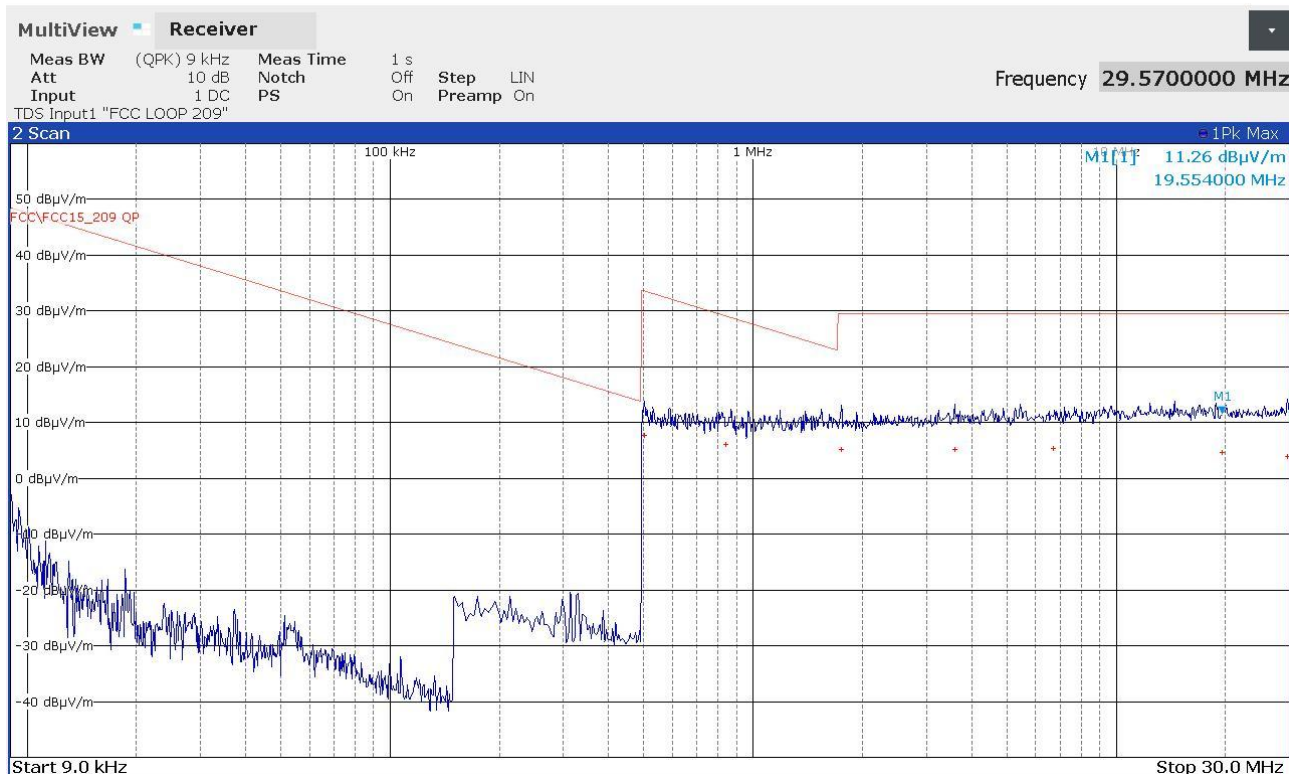
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
502000	+7,74	-25,85
598000	+6,95	-25,12
1390000	+5,39	-19,35
2326000	+5,12	-24,42
5006000	+5,19	-24,35
9058000	+5,28	-24,26
20978000	+4,17	-25,37

24057216_2

Panozzo 24057217



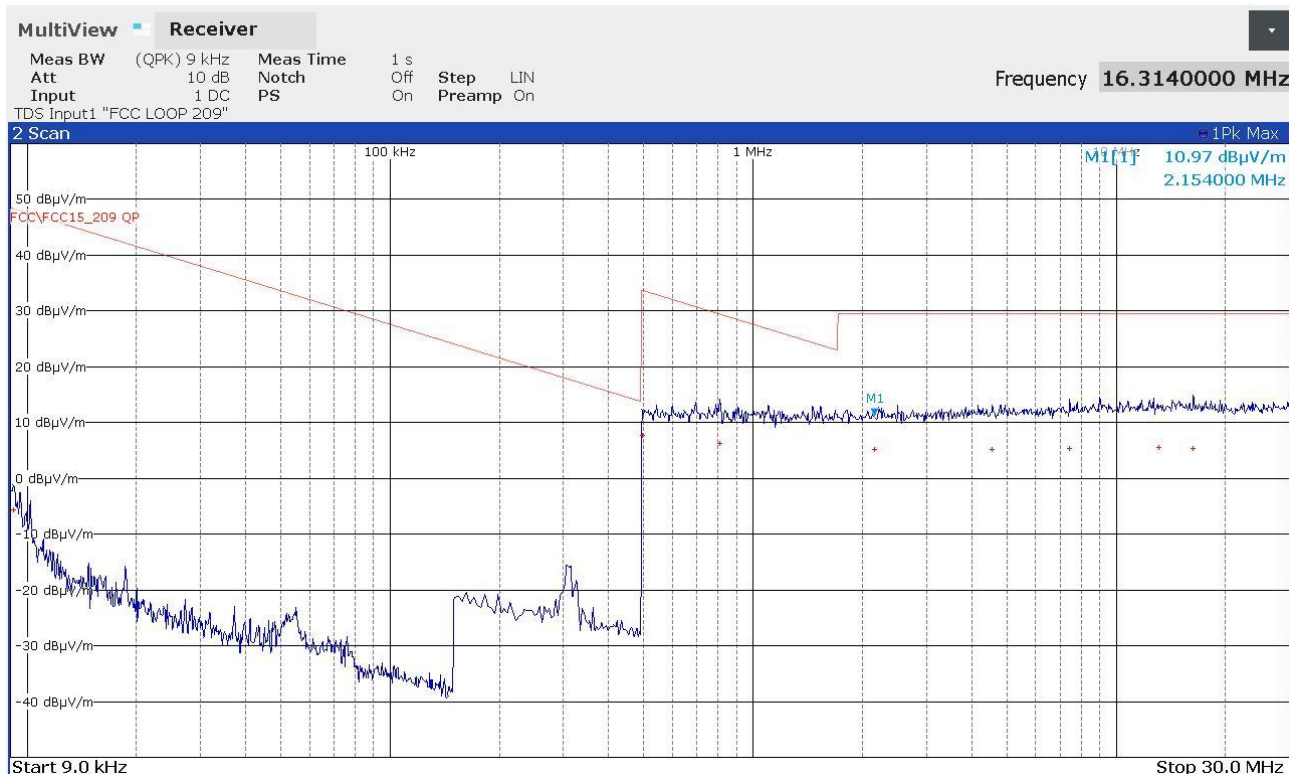
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
502000	+7,71	-25,88
838000	+6,13	-23,01
1754000	+5,23	-24,31
3586000	+5,19	-24,35
6702000	+5,42	-24,12
19554000	+4,72	-24,82
29570000	+3,99	-25,55

24057217_2

Panozzo 24057218



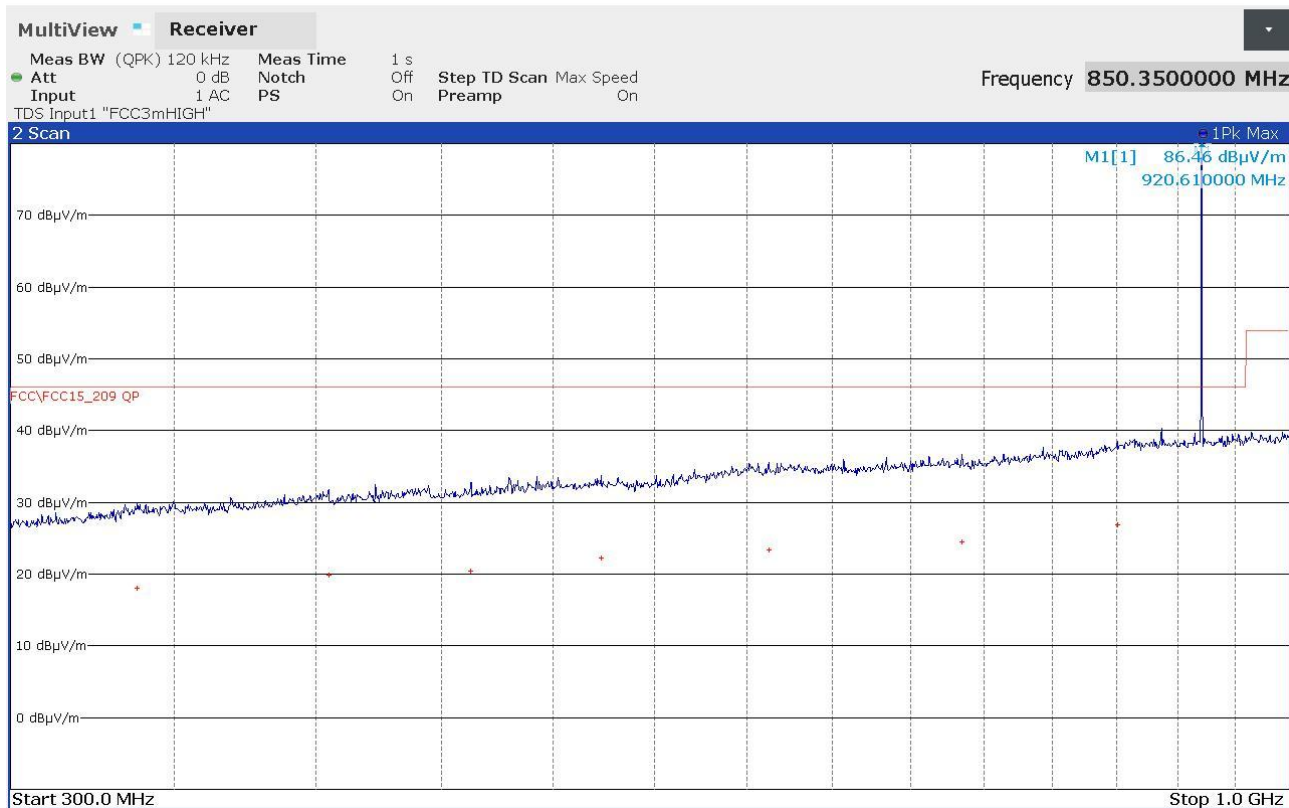
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
9160	-5,60	-53,97
494000	+7,75	-25,98
810000	+6,32	-23,11
2154000	+5,17	-24,37
4546000	+5,17	-24,37
7446000	+5,40	-24,14
13102000	+5,57	-23,97
16314000	+5,33	-24,21

24057218_2

Panozzo 24057220



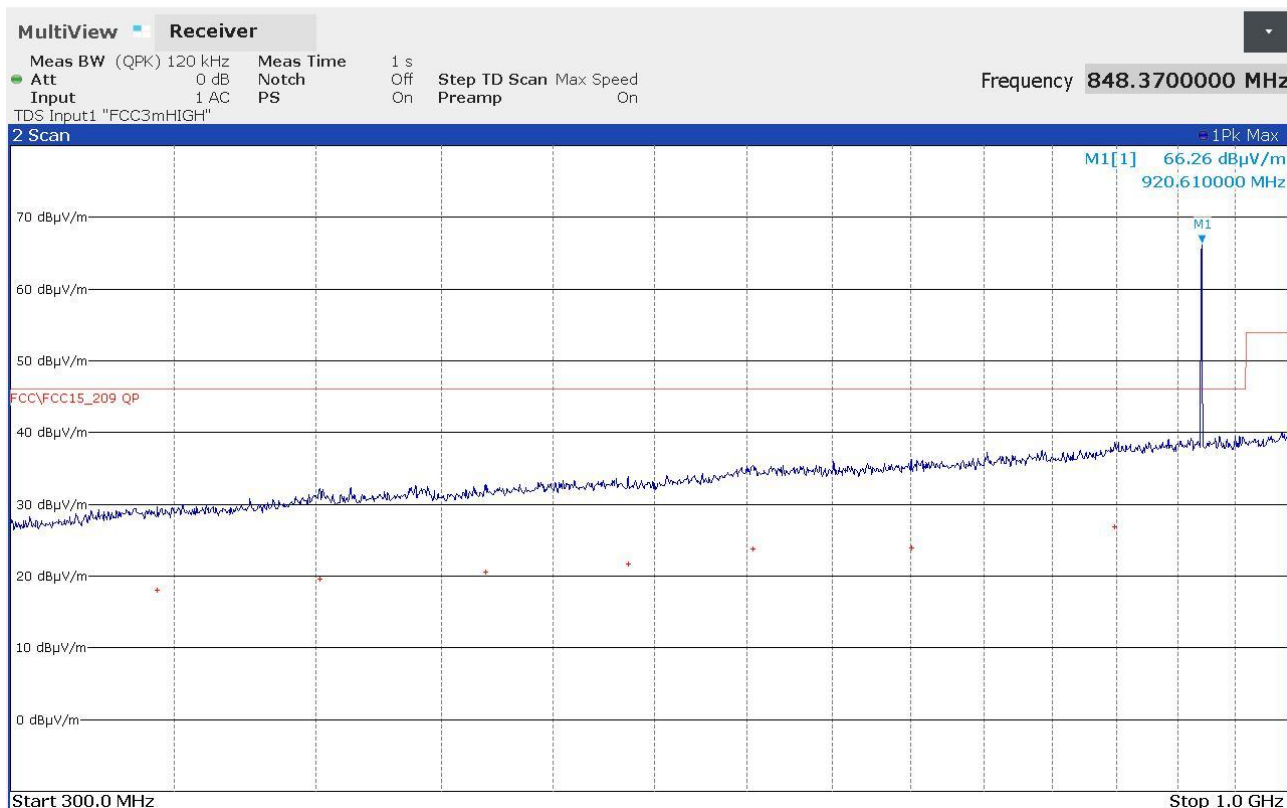
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
338010000	+17,97	-28,05
404760000	+19,81	-26,21
462840000	+20,36	-25,66
523170000	+22,29	-23,73
612570000	+23,36	-22,66
734760000	+24,48	-21,54
850350000	+26,90	-19,12

24057220_2

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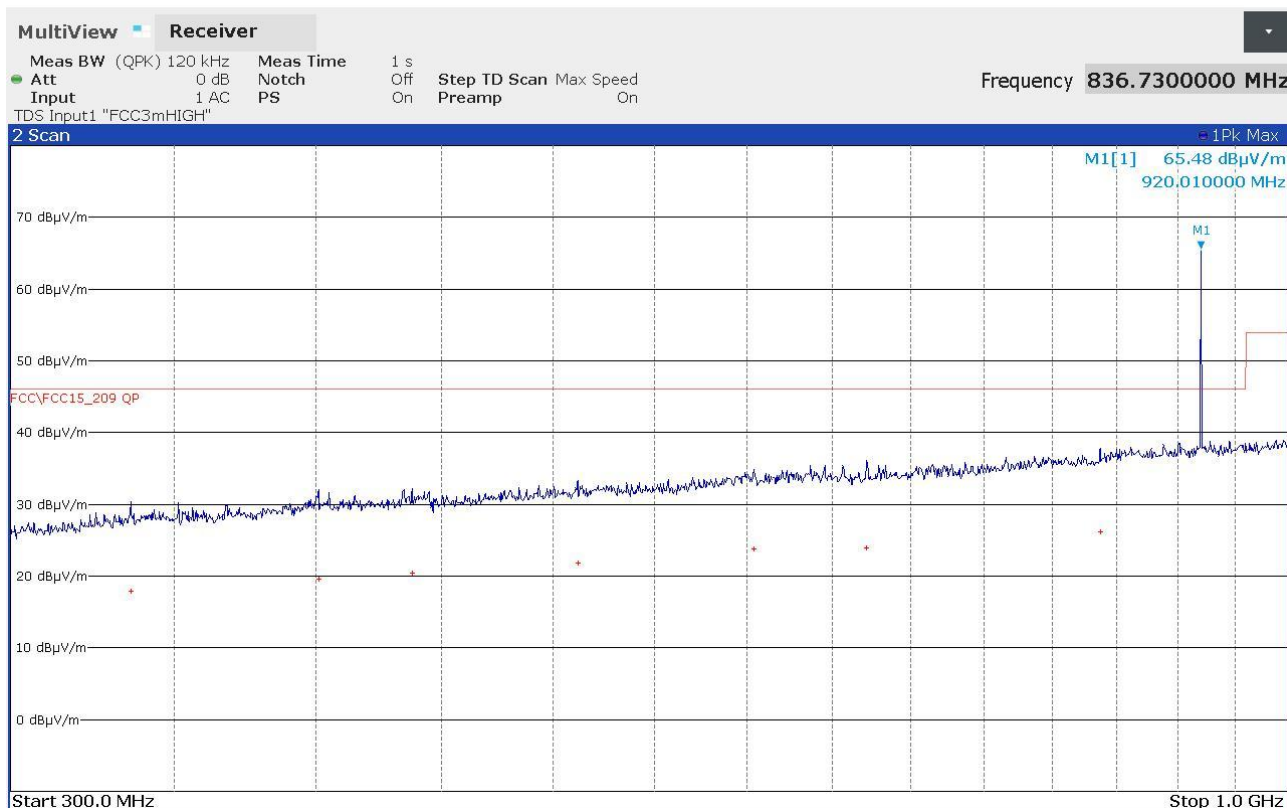
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
344520000	+18,10	-27,92
401310000	+19,51	-26,51
469080000	+20,57	-25,45
536460000	+21,74	-24,28
603720000	+23,72	-22,30
700470000	+23,99	-22,03
848370000	+26,83	-19,19

24057221_2

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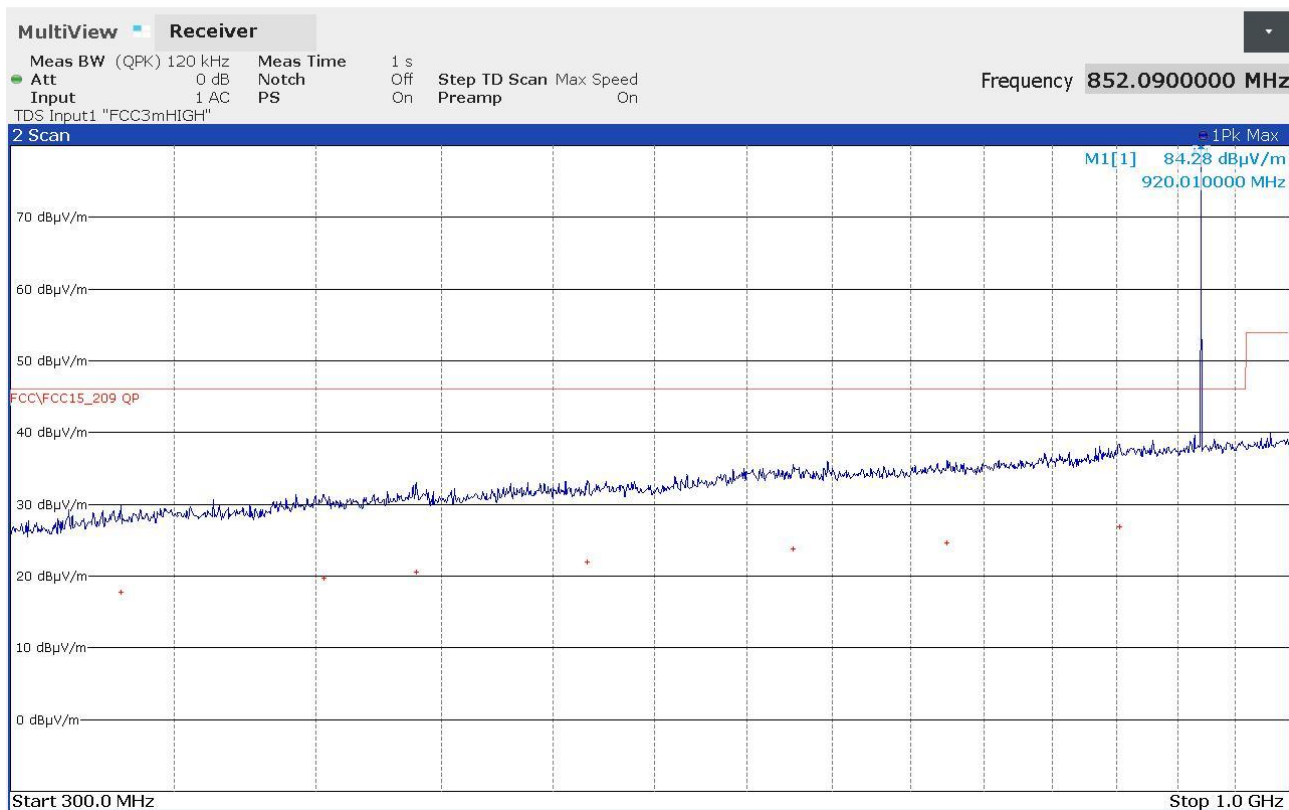
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
336090000	+17,93	-28,09
400950000	+19,59	-26,43
437760000	+20,41	-25,61
511710000	+21,89	-24,13
603930000	+23,72	-22,30
671790000	+23,88	-22,14
836730000	+26,19	-19,83

24057222_2

Panozzo 24057223



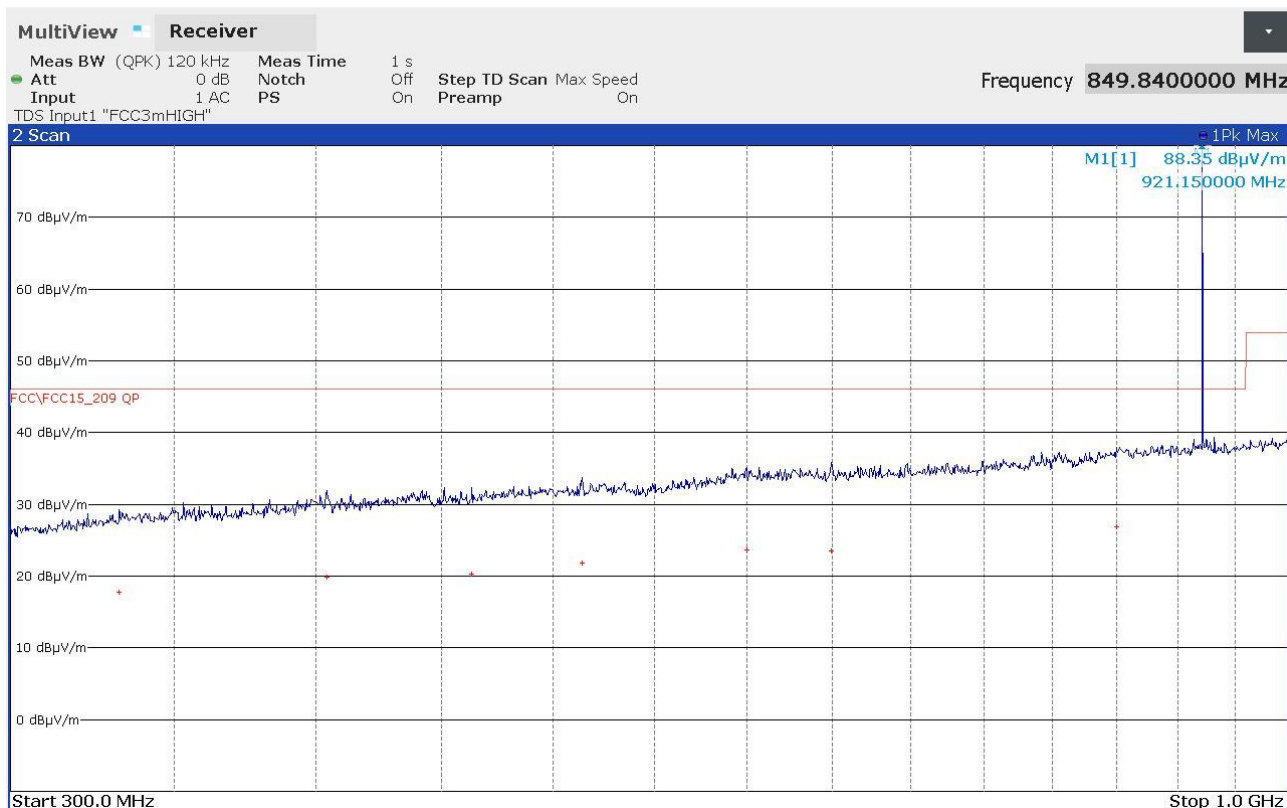
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
332820000	+17,75	-28,27
402960000	+19,75	-26,27
439440000	+20,56	-25,46
516300000	+21,99	-24,03
626880000	+23,78	-22,24
724650000	+24,69	-21,33
852090000	+26,92	-19,10

24057223_2

Panozzo 24057226



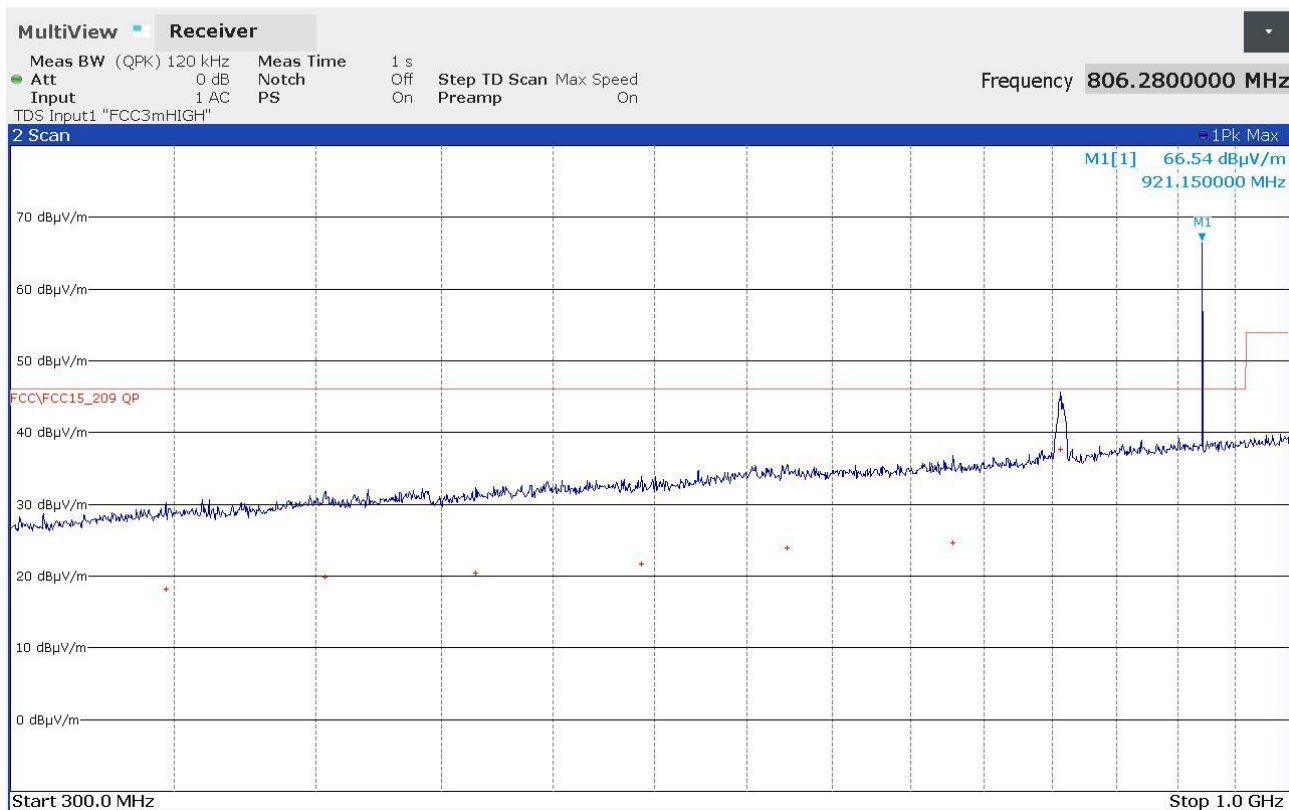
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
332370000	+17,82	-28,20
403980000	+19,83	-26,19
463140000	+20,33	-25,69
513690000	+21,82	-24,20
599880000	+23,64	-22,38
649800000	+23,52	-22,50
849840000	+26,82	-19,20

24057226_2

Panozzo 24057227



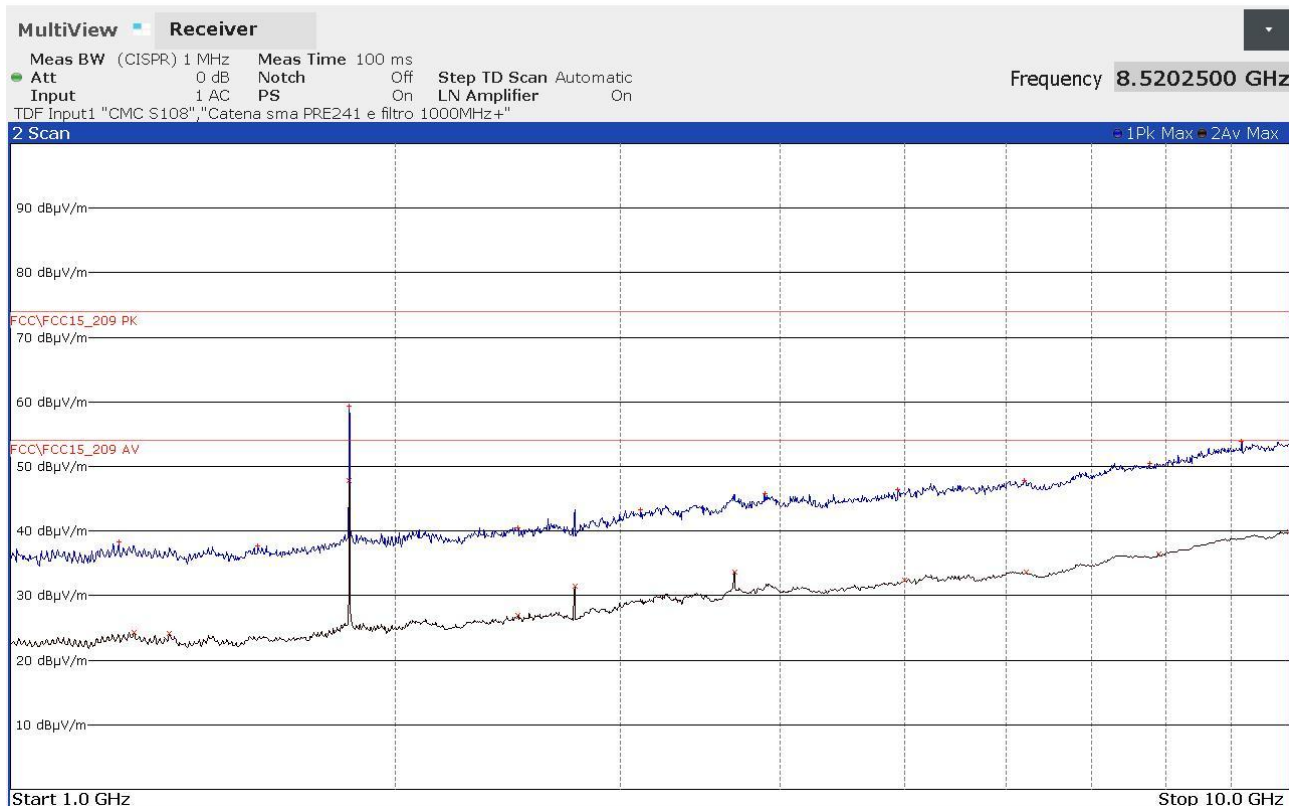
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
347280000	+18,11	-27,91
403530000	+19,88	-26,14
464970000	+20,45	-25,57
543510000	+21,73	-24,29
623340000	+23,94	-22,08
728550000	+24,67	-21,35
806280000	+37,72	-8,30

24057227_2

Panozzo 24057228

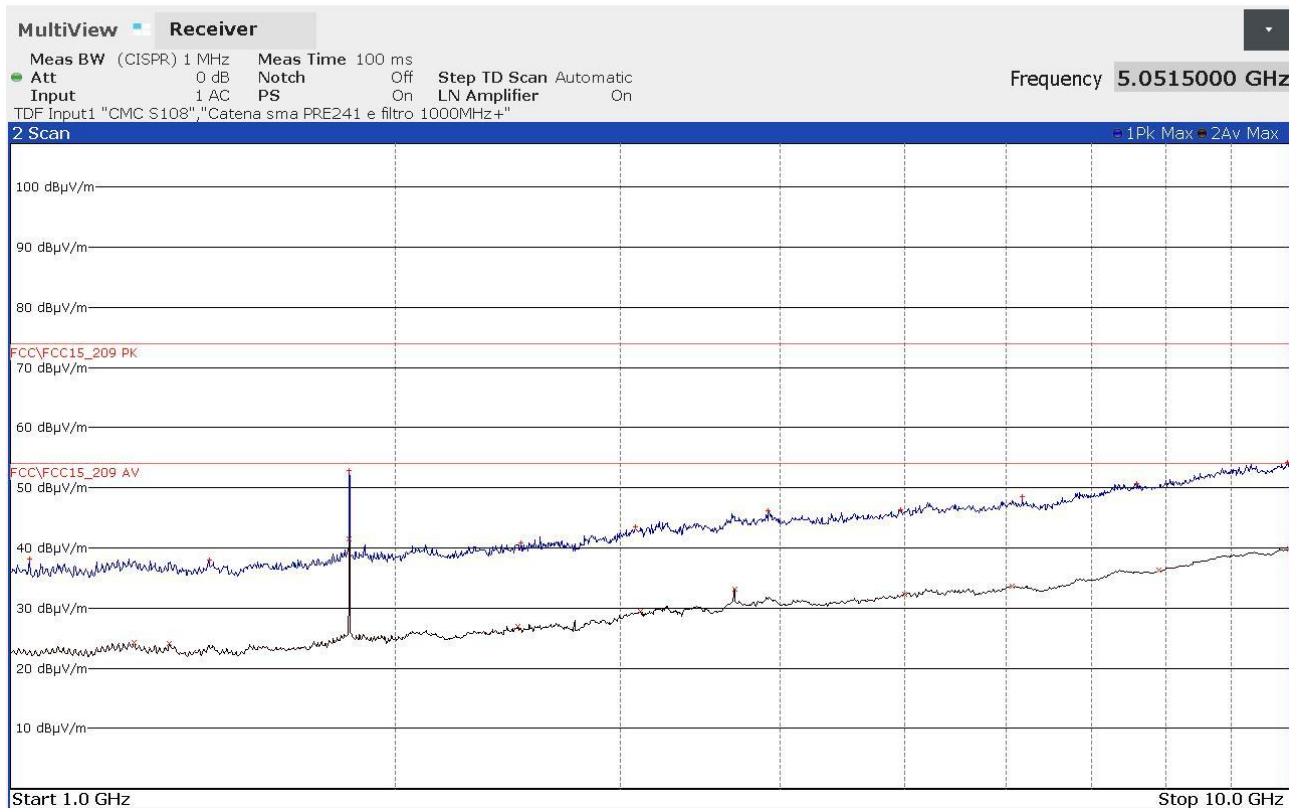


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1215500000	+38,26	-35,72	1249000000	+24,29	-29,69
1561000000	+37,71	-36,27	1331500000	+24,08	-29,90
1841250000	+59,31	-14,67	1841250000	+47,87	-6,11
2495000000	+40,51	-33,47	2495000000	+26,99	-26,99
3107250000	+43,37	-30,61	2761750000	+31,53	-22,45
3886500000	+45,72	-28,26	3681250000	+33,61	-20,37
4942500000	+46,39	-27,59	4999750000	+32,37	-21,61
6200750000	+47,76	-26,22	6228000000	+33,70	-20,28
7777250000	+50,52	-23,46	7900250000	+36,39	-17,59
9175750000	+53,86	-20,12	9995000000	+39,85	-14,13

24057228_2

Panozzo 24057229

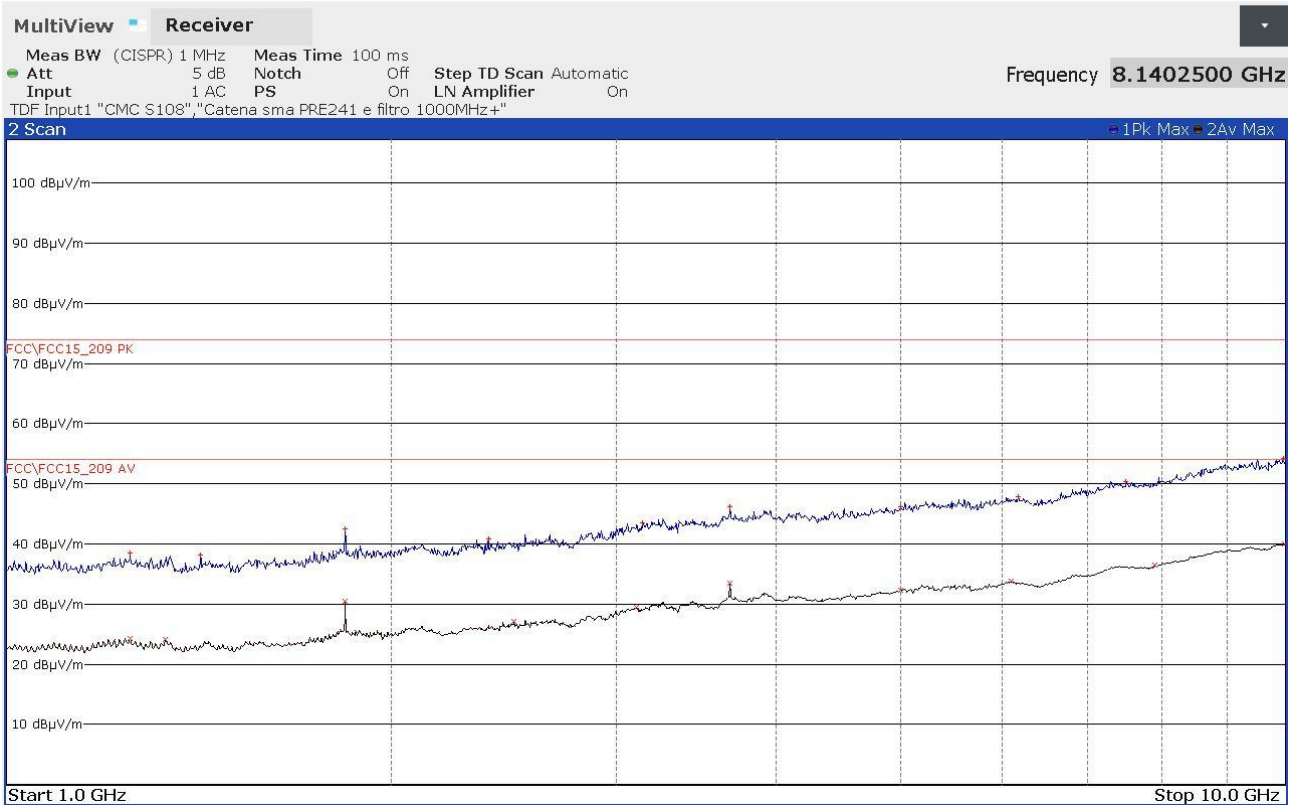


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1034750000	+38,20	-35,78	1248750000	+24,29	-29,69
1429500000	+38,02	-35,96	1331500000	+24,09	-29,89
1841250000	+52,83	-21,15	1841250000	+41,44	-12,54
2507250000	+40,77	-33,21	2494500000	+27,01	-26,97
3080500000	+43,50	-30,48	3108250000	+29,47	-24,51
3912000000	+46,16	-27,82	3681250000	+33,07	-20,91
4968750000	+46,28	-27,70	4999750000	+32,37	-21,61
6178750000	+48,59	-25,39	6071000000	+33,66	-20,32
7590750000	+50,67	-23,31	7900250000	+36,35	-17,63
9967500000	+54,25	-19,73	9992500000	+39,78	-14,20

24057229_2

Panozzo 24057230

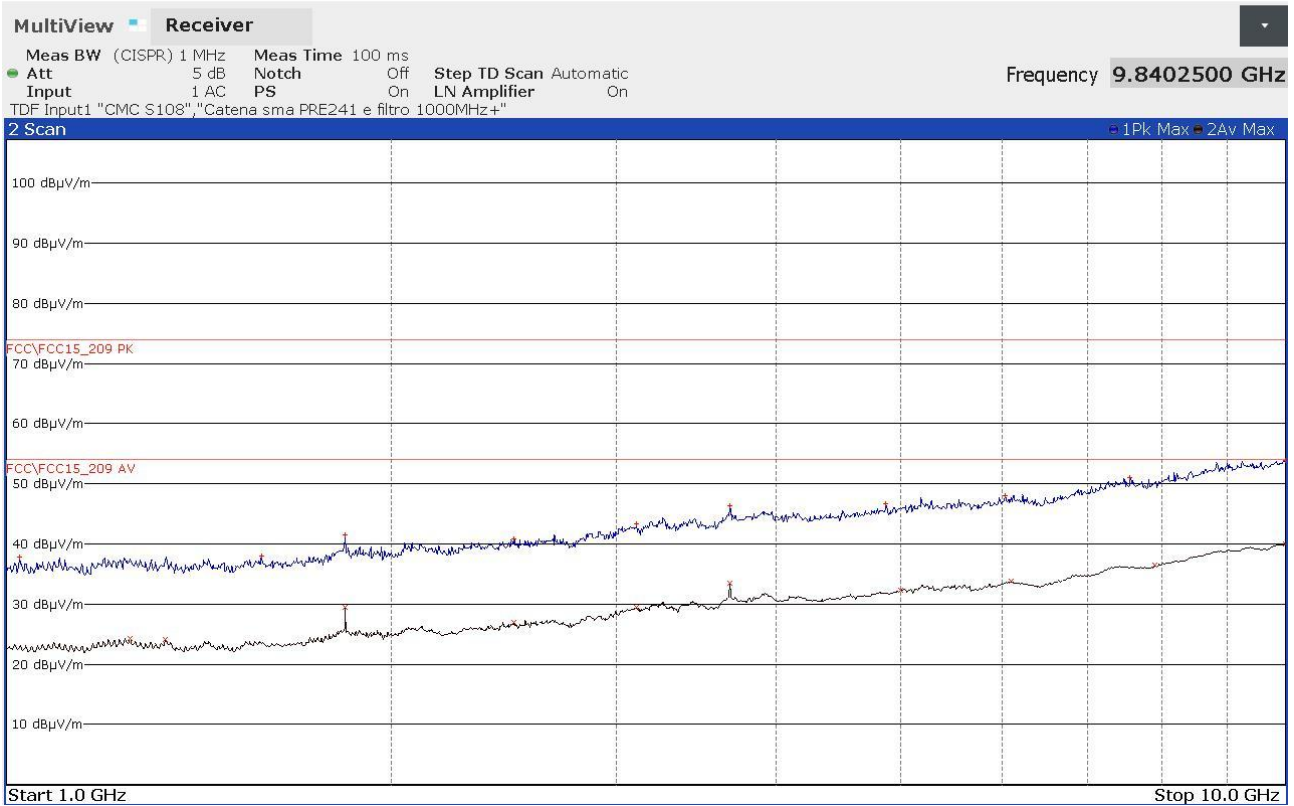


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1249250000	+38,45	-35,53	1249000000	+24,30	-29,68
1418500000	+38,09	-35,89	1331500000	+24,06	-29,92
1840000000	+42,58	-31,40	1840000000	+30,51	-23,47
2381250000	+40,89	-33,09	2494250000	+27,04	-26,94
3145000000	+43,45	-30,53	3108250000	+29,51	-24,47
3678750000	+46,21	-27,77	3678750000	+33,55	-20,43
5003750000	+46,13	-27,85	4999750000	+32,35	-21,63
6182750000	+47,92	-26,06	6099250000	+33,73	-20,25
7507000000	+50,36	-23,62	7900250000	+36,45	-17,53
9958000000	+54,13	-19,85	9990000000	+39,98	-14,00

24057230_2

Panozzo 24057231

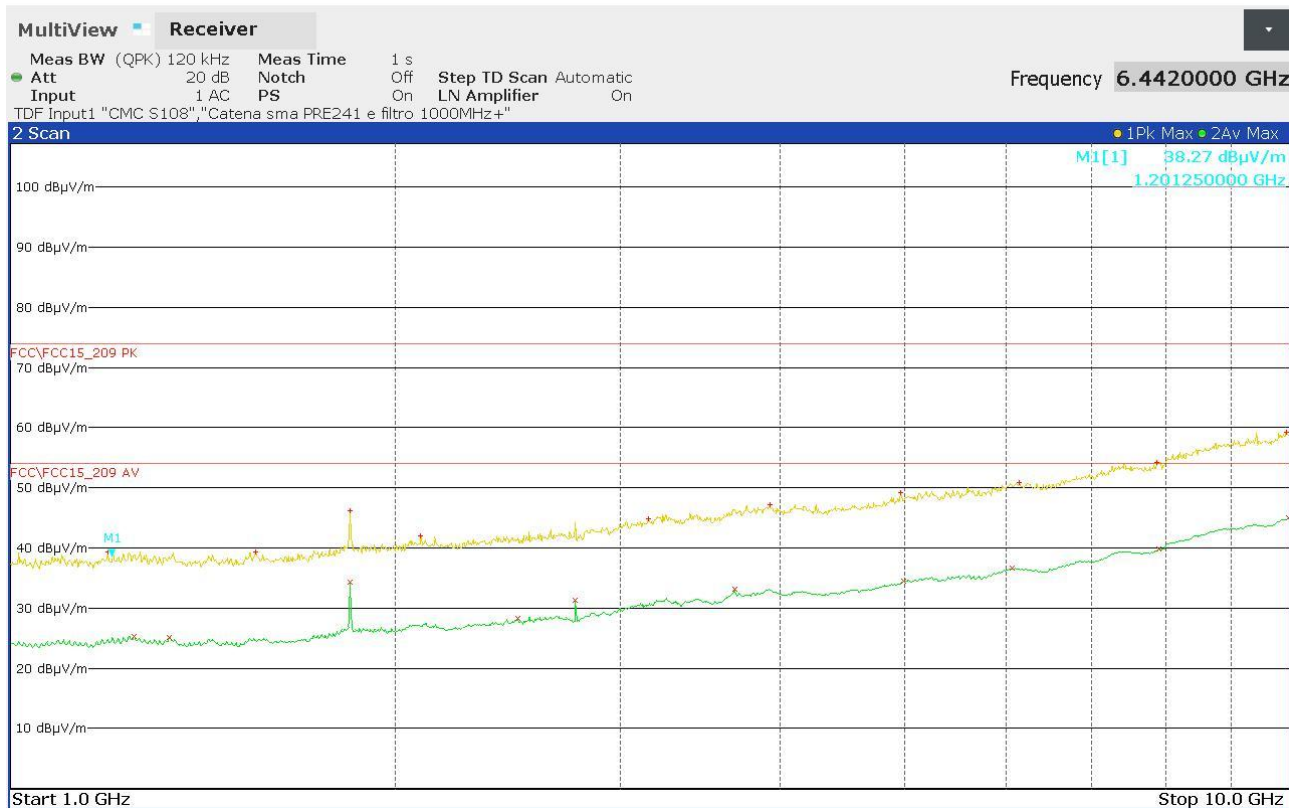


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1024000000	+37,80	-36,18	1249250000	+24,32	-29,66
1582000000	+37,94	-36,04	1331750000	+24,07	-29,91
1840000000	+41,45	-32,53	1840000000	+29,49	-24,49
2495000000	+40,81	-33,17	2494500000	+27,03	-26,95
3109000000	+43,37	-30,61	3108000000	+29,50	-24,48
3678750000	+46,35	-27,63	3678750000	+33,51	-20,47
4870000000	+46,61	-27,37	4999750000	+32,32	-21,66
6040250000	+48,06	-25,92	6099750000	+33,73	-20,25
7557750000	+51,00	-22,98	7900500000	+36,46	-17,52
9991250000	+53,92	-20,06	9993250000	+39,98	-14,00

24057231_2

Panozzo 24057232

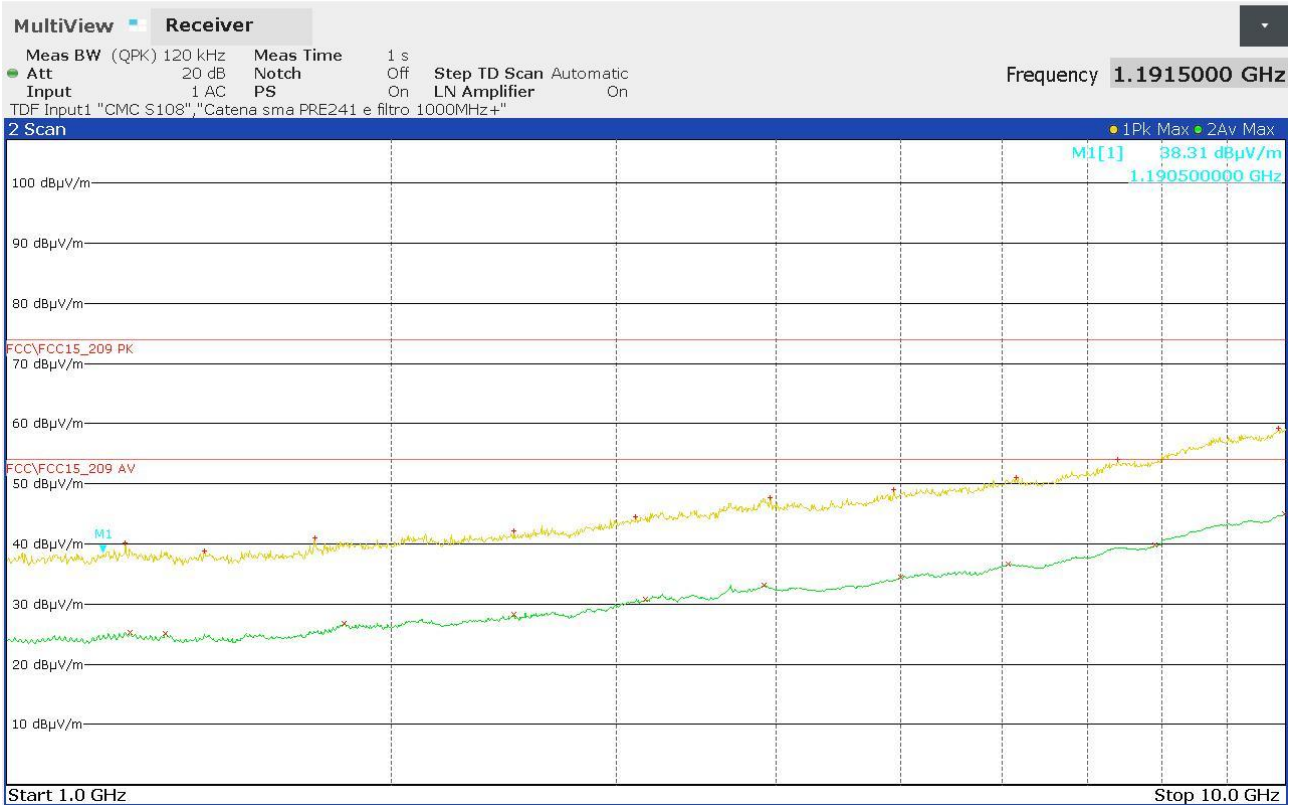


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1191500000	+39,35	-34,63	1249000000	+25,32	-28,66
1554750000	+39,40	-34,58	1331750000	+25,13	-28,85
1842250000	+46,17	-27,81	1842250000	+34,29	-19,69
2093500000	+41,94	-32,04	2494000000	+28,21	-25,77
3152250000	+44,90	-29,08	2763500000	+31,37	-22,61
3926500000	+47,19	-26,79	3684500000	+33,16	-20,82
4965500000	+49,15	-24,83	4994750000	+34,43	-19,55
6148750000	+50,80	-23,18	6069250000	+36,64	-17,34
7879000000	+54,27	-19,71	7900500000	+39,89	-14,09
9937250000	+59,23	-14,75	9990250000	+44,95	-9,03

24057232_2

Panozzo 24057233



FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1238500000	+40,11	-33,87	1249250000	+25,34	-28,64
1427500000	+38,87	-35,11	1331500000	+25,13	-28,85
1741750000	+41,07	-32,91	1837500000	+26,81	-27,17
2492250000	+42,09	-31,89	2494250000	+28,25	-25,73
3104750000	+44,44	-29,54	3158750000	+30,77	-23,21
3956500000	+47,76	-26,22	3914000000	+33,10	-20,88
4942000000	+49,02	-24,96	4999500000	+34,44	-19,54
6156250000	+51,03	-22,95	6069000000	+36,62	-17,36
7395000000	+53,99	-19,99	7900750000	+39,90	-14,08
9874500000	+59,24	-14,74	9990000000	+44,96	-9,02

24057233_2

9.2 Peak Output Power

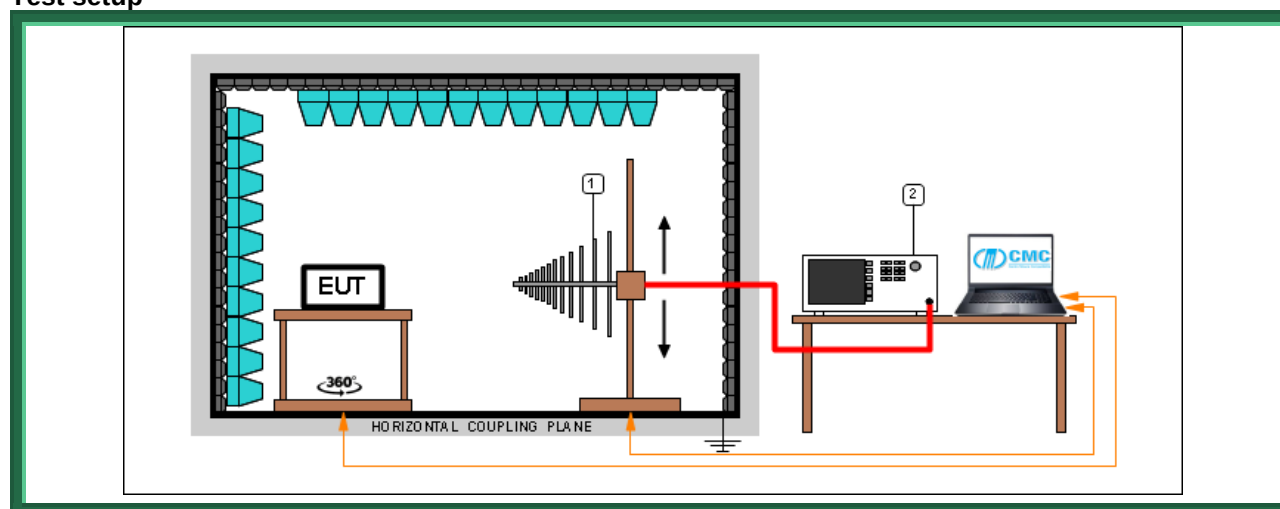
Tested by	C. Panozzo
Test date	17.06.2024
Test location (stand)	Semi-anechoic chamber (CMC A070)
Basic standard(s)	ANSI C63.10 cl. 11.9.1.1
Product standard(s)	FCC Rules and Regulation; Titles 47 Part. 15.209 and 249
Supplementary test set-up description	EUT – antenna distance: 3 m
Supplementary information	--

Acceptance limits

Frequency range (MHz)	RF Power Output (mV/m)	RF Power Output dB(μV/m)
902 – 928	50	94

Frequency range (MHz)	RF Power Output (mV/m)	RF Power Output dB(μV/m)
2400 – 2483,5	50	94

Test setup



Test setup PE004_03

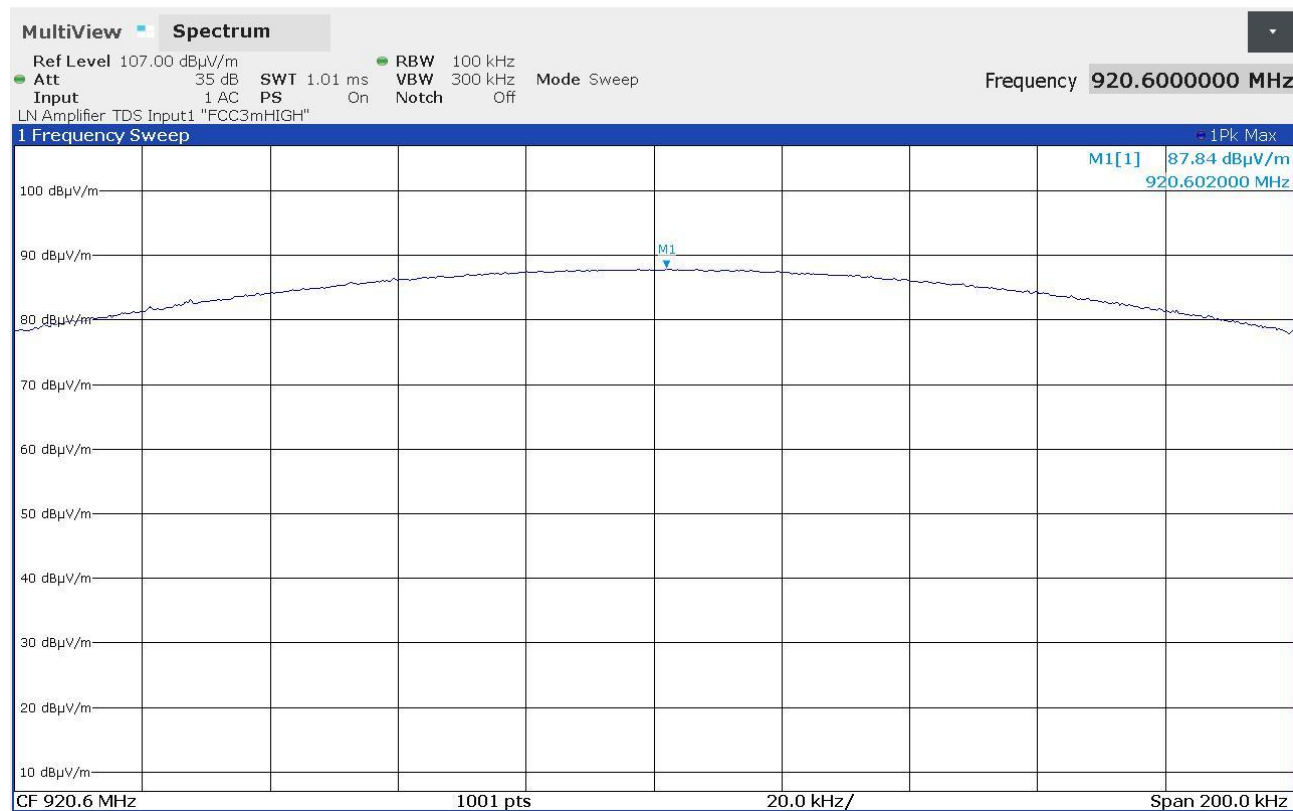
Nr.	Id. Number	Manufacturer	Model	Serial number	Description	Last calibration date	Calibration expiration
2	CMC S353	Rohde & Schwarz	ESW26	101492	Emi Test Receiver	December 2023	December 2024
1	CMC S287	Schwarzbeck	VUSLP 9111B	9111B-203	Broadband Antenna	August 2022	August 2025

Result

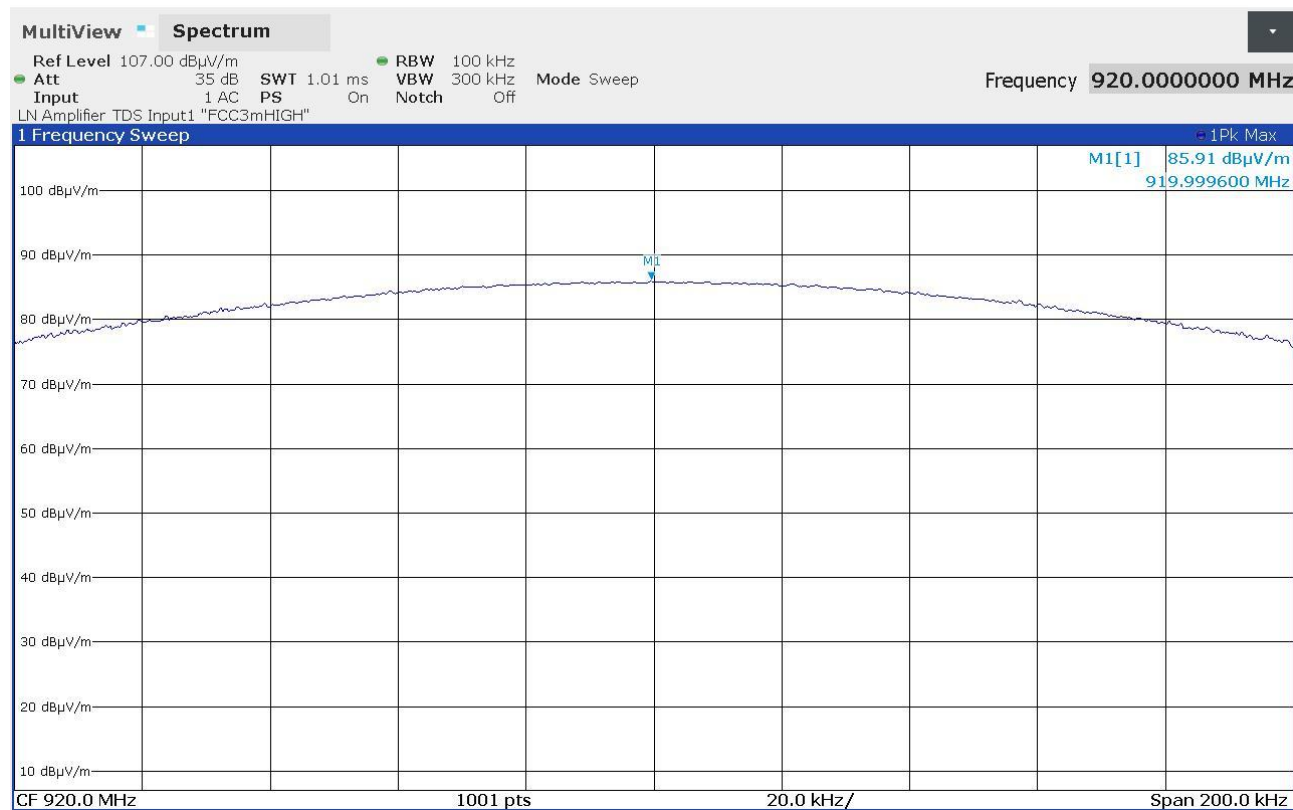
<i>Transmission channel (MHz)</i>	<i>Polarization</i>	<i>Graphs</i>	<i>Measured level (dBμV/m)</i>	<i>Limit (dBμV/m)</i>
920,25	Worst case	G24057224	85,91	94,00
920,60	Worst case	G24057219	87,84	94,00
921,15	Worst case	G24057225	89,97	94,00

Graphs

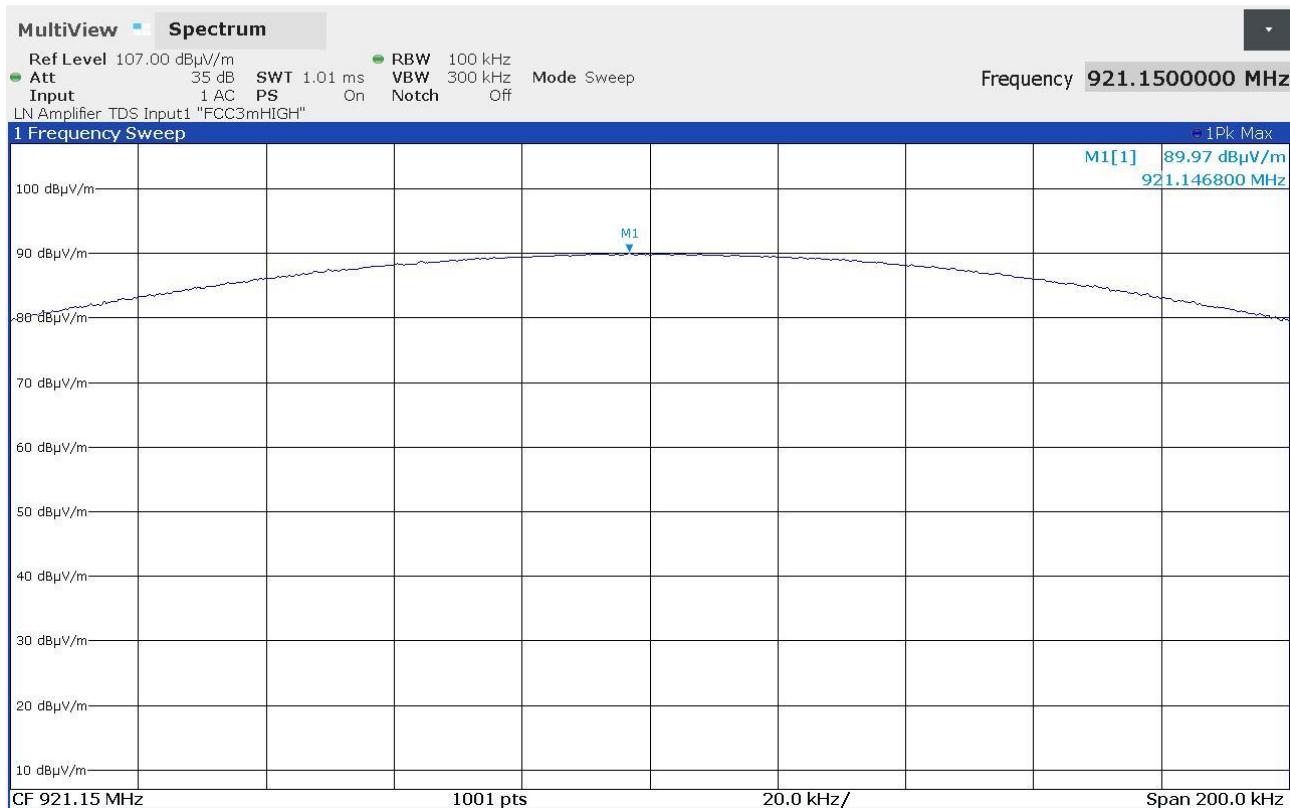
Panozzo 24057219



Panozzo 24057224



Panozzo 24057225



Attachment 1

Measurement uncertainty

Test	Test Setup	Expanded uncertainty			Note
Conducted emission CISPR 16 LISN 50uH 0,009-0,0150 MHz	PE001_01			3,6 dB	1
Conducted emission CISPR 16 LISN 50uH 0,150-30,0 MHz	PE001_01			2,9 dB	1
Conducted emission CISPR 16 Voltage Probe 0,15-30 MHz	PE001_02			2,3 dB	1
Conducted emission CISPR 16 Current Probe 0,15-30 MHz	PE001_03			2,5 dB	1
Conducted emission CISPR 16 ISN 0,15-30 MHz	PE001_04			4,7 dB	1
Clic CISPR 16 LISN 50uH 0,150-30,0 MHz	PE001_05			2,9 dB	1
Radiated Emission CDNE 30-300 MHz	PE001_06			3,3 dB	1
Disturbance Power 30-300 MHz	PE002_X1			3,8 dB	1
Radiated Emission LAS 0,15-30 MHz	PE003_01			2,0 dB	1
Radiated Emission CISPR 16 Loop Ant. 0,15-30 MHz	PE004_X1			4,1 dB	1
Radiated Emission CISPR 16 Bicon. Ant. 30-300 MHz	PE004_X2			4,7 dB	1
Radiated Emission CISPR 16 LogP. Ant. 300-1000 MHz	PE004_X3			4,6 dB	1
Radiated Emission CISPR 16 Horn Ant. 1-18 GHz	PE004_X4			4,7 dB	1
Human Exposure to electromagnetic fields	PE005_01			14,2 %	1
Harmonics	PE006_01	10 mA	+	2,9 %	1
Flicker	PE007_01			3,40 %	1
Radiated Immunity 80 MHz - 6 GHz	PE102_XX	2,26 dB		0,89 V/m a 3V/m	1
Conducted Immunity 0,15 - 230 MHz	PE105_XX	1,26 dB		0,47 V a 3V	1
AC Magnetic field	PE106_01	1,55 %		0,15 A/m a 10A/m	1
Pulse Magnetic field	PE107_01	6,21 %		18,6 A/m a 300A/m	1
Dumped Magnetic field	PE108_01	6,21 %		1,86 A/m a 30A/m	1
Common mode conducted immunity	PE112_01	2,11 %		0,21 V a 10V	1

Attachment 1

Test	Test Setup	Expanded uncertainty	Note
Power/Spurious 9kHz-30MHz	PR001_X1	4,1 dB	1
Power/Spurious ERP 30-1000MHz d=10m/3m	PR001_X2+X3	4,8 dB	1
Misura della potenza EIRP 1-18GHz d=3m	PR001_X4+X5	4,7 dB	1
Misura della potenza EIRP 18-40GHz d=3m	PR001_X6	5,1 dB	1
Frequency error	PR002_01+02	$< 1 \times 10^{-7}$	1
Timing zero span (1001pts.)	PR002_01+02	0,2 % SWT	1
Modulation bandwidth	PR002_01+02	$< 1 \times 10^{-7}$	1
Conducted RF power and spurious emission	PR002_01+02	1,1 dB	1
Adjacent channel power	PR002_01+02	1,1 dB	1
Blocking	PR002_01+02	1,1 dB	1

Test	Test Setup	Expanded uncertainty	Note
Electrostatic discharge immunity test	PE101_0X		2
Electrical fast transients / burst immunity test	PE103_0X		2
Surge immunity test	PE104_0X		2
Short interruption immunity test	PE109_01		2
Ring Wave immunity test	PE110_01		2
Low frequency immunity test	PE111_01		2
Dumped Oscillatory immunity test	PE113_01		2
Rev_24_01 date 03/02/2024			

Note 1:

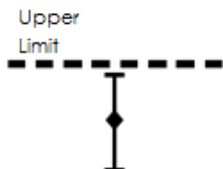
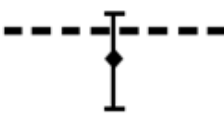
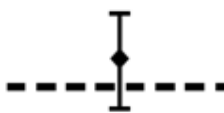
The expanded uncertainty reported according to the document EA-4-02 is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of $p = 95\%$

Note 2:

It has been demonstrated that the used test equipment meets the specified requirements in the standard with at least a 95% confidence, covering factor $k=2$

Attachment 1

Judgement of compliance

Case 1	Case 2	Case 3	Case 4
 The sample complies with the requirements. The measurement results is within the specification limit when the measurement uncertainty is taken into account.	 The sample complies with the requirements. It is not possible to state compliance using a 95% coverage probability for the expanded uncertainty although the measurement result is below the limit.	 The sample does not comply with the requirements. It is not possible to state compliance using a 95% coverage probability for the expanded uncertainty also the measurement result is upper the limit.	 The sample does not comply with the requirements. The measurement results is outside the specification limit when the measurement uncertainty is taken into account.

In agreement with ILAC-G8:09/2019 cl.4.2.1 Guidelines on Decision Rules and Statements of Conformity

Quality manual references – Internal procedure

Internal Procedure PM001 rev. 4.0 (Quality Manual)	Measure procedure
Internal Procedure INC_M rev. 10.0 (Quality Manual)	Measurement uncertainty calculation